An Address
ON
JOHN LOCKE AS A PHYSICIAN.

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GENTLEMEN,—Among the great men of the seventeenth century not one has more enduring claims to our grateful remembrance than John Locke—philosopher, philanthropist, and physician. As a philosopher his praise is in the colleges. As the apostle of common sense he may be ranked with Socrates and a few others who have brought philosophy from the clouds to the working-day world. Of his special virtues and qualifications as the typical English philosopher nothing need be said, but were there time I would fain dwell upon his character as a philanthropist—in the truest sense of the word. The author of the Epistle on Toleration, the Treatise on Education, and the Constitution of Carolina, the man who pleaded for "absolute Liberty, just and true Liberty, equal and impartial Liberty," the man who wrote the memorable words, "All men are naturally in a state of freedom, also of equality," must be ranked as one of the great benefactors of the race.

With the faculty Locke's connexion has usually been described as "loose and uncertain." Indeed, we knew him chiefly as a friend of Sydenham. Until the appearance of Fox-Bourne's "Life" it had not been recognised that he was at times an active practitioner, and that throughout the greater part of his long life he was ready to treat cases and to give advice; still less was it known that he was a writer of medical essays, and that he had left a large body of clinical reports and papers. I had become familiar with his professional relations through John Brown's essay, "Locke and Sydenham," and many additional details are given in the "Life" just referred to, but for the more important facts I have made a careful study of the Locke MSS. in the British Museum and in the Record Office.

I.—LIFE.

Let me first give a brief summary of Locke's life. He was born in the county of Somerset in 1632, the son of an attorney who at the outbreak of the civil war joined the Parliamentary side. Of his boyhood and early education but little are known. In 1646 he entered Westminster School under the famous Dr. Busby, where he had as fellow students Richard Lower, Walter Needham, and John Mapletoft, who subsequently became well-known physicians. In 1652 he entered Christ Church, Oxford, and received his B.A. degree in 1655 and the M.A. in 1658. In the following year he became senior student or Fellow of Christ Church, in 1660 lecturer on Greek, and in 1662 lecturer on Rhetoric. In 1665 he served as secretary to the embassy of Sir Walter Vane to the Elector of Brandenburg. Until 1660 a student of classics and rhetoric, Locke appears to have been at a loss to know exactly what calling to follow. Thoroughly disgusted, he had broken with the old scholastic philosophy and, imbued with the new leaning of Bacon and Descartes, felt what Donne calls "the sacred hunger of science." But what probably turned his attention most actively to medicine was the presence in Oxford of the celebrated Robert Boyle, who with his associates had formed a scientific club, the "invisible college," which became the nucleus of the Royal Society. Letters of this period show Locke to have been busy with experimental physics, working at problems suggested by Boyle, taking daily notes on the weather (a practice which he kept up for many years), and gradually becoming well versed in the sciences cognate to medicine. Unfortunately we have very little information as to the character of his medical studies, which seem, however, to have been of a rather desultory nature, as he did not comply with the very easy requirements for the degree. On these Fox-Bourne makes the following comment: "All that was expected from an applicant for a bachelorship in physic was regular attendance during three years at the lectures of the Arabic professor and of the professors of anatomy and medicine, together with participation in a certain number of disputations in the medical school, and after that little more than a delay of four years was necessary to qualify him for the doctorship. The medicine lectures, delivered every Tuesday and Friday morning during term, were limited to an exposition of the teaching of Hippocrates and Galen. For anatomy, the students had in the spring to attend the dissecting of one human body and to hear four lectures, each two hours long, upon it, and in the autumn to hear three lectures on the human skeleton." These requirements, however, were not complied with, and in November, 1666, he attempted to have a dispensation so that he could obtain the doctorship without previously becoming a bachelor. The request of Lord Clarendon, however, was not heeded, owing probably to the fact that Locke belonged to the Puritan party. During these years he seems to have been intimately associated with Dr. David Thomas, at that time a practitioner at Oxford. He writes to Boyle in February, 1666-67: "Mr. Thomas presents his humble service to you. He and I are now upon a new sort of chemistry; that is, extracting money out of the scholars' pockets, and if we can do that, you need not fear but that in time we shall have the lapis, for he that can get gold and silver out of scholars cannot doubt to extract it anywhere else." Though political influence was unavailing to procure the doctor's degree without complying with the regulations, it was potent enough to secure him in his senior studentship at Christ Church, a position usually held only by persons in holy orders, and this post, with the salary attached to it, Locke enjoyed till his expulsion in 1684.

Locke did not receive the bachelorship of medicine until 1674, in which year he was appointed to one of the two medical studentships at Christ Church, and it was supposed by his friends that this was a step preliminary to taking the doctor's degree, but to this he never proceeded. In 1666, when acting as an assistant to Dr. Thomas, Lord Ashley, afterwards the first Earl of Shaftesbury, the celebrated Achitophel of Dryden's satire, came to Oxford to drink the waters of the Astrop wells. He was the subject of a remarkable malady of which I shall subsequently give a detailed account. Dr. Thomas, to whom he had written to have the waters ready for him, was away but had left word with Locke to get them, and as there was some trouble and delay Locke called on Lord Ashley to apologise. There was a mutual attraction and from this acquaintance began a friendship between the two men which had important results, as in the following year we find Locke installed at Exeter House, the London residence of Lord Ashley, as physician and literary factotum.

From this date until 1675 Locke lived in Lord Ashley's family, occupying himself in all sorts of miscellaneous duties, some domestic, as finding young Anthony Ashley a wife, whom he subsequently attended on several interesting occasions. One duty which interests us in America very much is the share which he took in the Carolina colony. As secretary to the Lords Proprietors he was appointed one of the Landgraves and wrote, it is supposed, the celebrated "Fundamental Constitutions of the Government of Carolina," the original draft of which (in his handwriting), with many alterations and erasures, may be seen in the Record Office. The celebrated clause, "No person whatsoever shall disturb, molest, or persecute another for his speculative opinions in religion or his way of worship," expresses the spirit of toleration for which Locke strove all through his life. Subsequently, after Lord Ashley was raised to the peerage as the Earl of Shaftesbury, Locke became Secretary of Presentations. During all this period he was deeply interested in medicine and was in intimate association with Sydenham, with Mapletoft, and with other well-known physicians of the day, though it was not until 1674 that he took his M.B. at Oxford. About this time he began to suffer much in his health and in 1675 he went to France, where he remained, chiefly at Montpelier and Paris, for four years. His journals during this period, which are very full, indicate his continued interest in the profession, though, as he writes to Mapletoft, "My health, which you are so kind to in your wishes, is the only mistress I have a long time courted, and is so coy a one that it will take up the remainder of my days to obtain her good graces and keep her in good humor. She hath of late been very wayward, but I hope is coming about again." In another letter he

says: "For I doubt whether all the ortolans in France be able to communicate to me one grain of their fat, and I shall be well enough at my ease if, when I return, I can but maintain this poor tenement of mine in the same repair it is at present, without hope ever to find it much better. For I expect not that Dr. Time should be half so favourable to my crazy body as it has been to you in your late disease. 'Tis a good mark, but may have other dangers in it; for usually those whom that old winged gentleman helps up the hill are not yet got out of the reach of the winged boy who does such mischief with his bow and arrows."

From 1679 to 1684 Locke was again with Lord Shaftesbury, busily occupied in public business, though still maintaining an intimate association with Sydenham and his medical friends. After Lord Shaftesbury's death Locke himself fell under suspicion of having taken part in schemes against the Crown and from 1683 to 1689 found it safer to live in retirement in Holland. In 1684, by the peremptory order of the King, he was dismissed from his studentship in Christ Church. At the Revolution he returned to London and became actively engaged in literary and political work. Failing health compelled his retirement to Oates, in the neighbourhood of London, where, with Lady Masham and her daughter, he found a delightful home. He died quietly in 1704.

No member of our profession of any age or any country has made so many important contributions to philosophy and practical politics as Dr. Locke. Professor Fowler remarks that the views published in his treatises on Government, Religion, Toleration, Education, and Finance form new points of departure with which no writer on the history of these subjects can dispense. The same writer says of the effect of his writings on the history of progress and civilisation: "In an age of excitement and prejudice he set men the example of thinking calmly and clearly. When philosophy was almost synonymous with the arid discussion of scholastic subtleties he wrote so as to interest statesmen and men of the world. At a time when the chains of dogma were far tighter and the penalties of attempting to loosen them far more stringent than it is now easy to conceive he raised questions which stirred the very depths of human thought. And all this he did in a spirit so candid, so tolerant, so liberal, and so unselfish, that he seemed to be writing, not for his own party or his own times, but for the future of knowledge and of mankind."

II.—LOCKE AND SYDENHAM.

The story of the friendship of these two great men has been told in a delightful way by the late Dr. John Brown, but he knew nothing of the Shaftesbury papers or of several other important manuscripts which have come to light since his essay was published. Sydenham, eight years Locke's senior, had taken the M.B. of Oxford in 1648, four years before Locke entered Christ Church. There is no evidence to indicate that these well-paired friends, as Fox-Bourne calls them, had met before Locke went to London with Lord Ashley in 1667. In the following year we find them practising together, Locke accompanying Sydenham on his rounds and much interested in the new plan of treating small-pox. In 1668 Sydenham wrote to Boyle: "I perceive my friend Mr. Locke hath troubled you with an account of my practice as he hath done himself in visiting with me very many of my variolous patients especially." But the best evidence of Locke's practice at this time and of his intimacy with Sydenham is found in his own handwriting in the British Museum in a bundle of original medical papers presented by William Seward. They consist of 17 small quarto pages, closely written, containing the reports of interesting cases which have been well summarised as follows by Fox-Bourne: "He was attending a kitchen-maid of the Ashley household who was afflicted with dropsy in September, 1667, and again in January, February, and March, 1667-8, and May and June, 1668. In April and May he prescribed for a hard cough with which one of his cousins, a boy of 14, and the son of his uncle, Peter Locke, was troubled, and he cured one young child of inflammatory fever in June and another of hysterics in November of the same year. He visited a 'sturdy youth' laid up with rheumatism, every day between August 28th and Sept. 19th, when he left him to continue using the medicine he had prescribed for him, and on March 1st, 1668-9, he was able to declare him convalescent. In the same March he treated a girl for fever, besides prescribing for two or three minor maladies; and in May, 1669, he cured a case of angina pectoris. We have no record of any other medical work done by him in 1669; but he had cases of erysipelas and gonorrhœa to deal with in January, 1669-70; one of quartan ague in March, another malady, morbilli, with which William Sydenham, apparently the son of his great friend, was afflicted, in the same month; two of dropsy in April and May, 1670; one of inflammatory fever which he treated nearly every day from the 26th of June till its fatal issue on the 11th of July; a case of disease of the kidneys, and another of stricture, in July; one of colic in August, and one of fever which occupied him every day from the 19th of August till the 2nd of September, when the patient died."

The case which Fox-Bourne refers to as angina pectoris may have been of this nature, though the disease was not recognised for a little more than a century later. The phrase is "suffocationem patiebatur et angostiam pectoris et circum collum." The report on the son of Sydenham, a lad, aged 11 years, who had measles, is very complete. The case seems to have been a very characteristic one: onset with cough, a chill and fever, and with slight running at the nose. On the fifth and sixth days a very abundant rash appeared on the face first, then spread over the whole body. Quite minute details are given—the state of the tongue, the state of the rash, and the condition of the eyes. By the ninth and tenth days the rash had disappeared. The notes are continued until the thirteenth day. Then follows a series of interrogations as to points in the case.

Evidence of their friendship exists in the comments and annotations which Sydenham has made in his own hand on some of Locke's writings and the great interest which Locke took in those of Sydenham. In the second edition of Sydenham's "Methodus Curandi Febres" there is inserted after the preface a Latin poem of 54 lines signed, "J. Locke." It was Sydenham's purpose at a later date to write a separate work on small-pox, and for this Locke prepared in 1670 a dedication and a preface, neither of which were used, and which will be referred to later. During Locke's long residence in France in his letters there are frequent references to Sydenham and frequent inquiries after his health, particularly in the letters to Mapletoft, who was a mutual friend. He also consulted Sydenham about Lady Northumberland's illness. It was probably before leaving England that Sydenham gave Locke the advice in a letter the original of which is in the Record Office.

Sydenham to Locke.—"Your age, ill habitt of body and approach of winter concurring, it comes to pass that the distemper you complaine of yealds not so soone to remedies as it would do under contrary circumstances. However, you may not in the least doubt but that a steddy persisting in the use of the following directions (grounded not on opinion but uninterrupted experience) will at last effect your desired cure. First, therefore, in order to the directing and subdueing also the ichorose matter 'twill be requisite to take your pills twice a weeke or for example every Thursday and Sunday about 4 o'clock in the morning and your clyster in the intermitting days about 6, constantly till you are well. In the next place, forasmuch as there is wanting in bodyes broken with business and dispirited upon the before-mentioned accounts, that stock of naturell heat which should bring the matter quickly to digestion 'twill be highly necessary that you cherish yourself as much as possibly you can by going to bed very early at night, even at 8 o'clock, which next to keeping bed that is impracticable will contributt more to your reliefe than can be imagined. As to diett all meals of easy digestion and that nourish well may be allowed, provided they be not salt, sweet or spiced and altho excepting fruits, roots and such like. For wine a total forbearance thereof if it could possibly be and in its steede the use of very mild small beere, such as our lesser houses do afford, would as near as I could guess be most expedient, for thereby your body would be kept cool, and consequently all accidents proceeding from hot and strange humors grating upon the part kept off. As to injections, in your case these things dissuade the use of them—First, your more than ordinary bothe naturall tenderness and delicacy of sense. Then the blood that has twice already bin fetched by this operation, which if we are not positively certaine (as how can we be) that it proceeded not from the hurt of the instrument will (if often repeted) endanger the excoriating the part and making it liable to accidents. Besides they have bin already used (perhaps as often as is wont to be don) and this is not a remedy to be long persisted in by the confession of everybody. Sure I am as I have over and over

sayd to you and you know it to be true by my written observations which you have long since seen, that I never use any where I am concerned alone, there being noe danger nor less certainty of a cure in the omitting and in relation to this nusiness I have now asked myselfe the question that I would doe and have resolved that I would lett them alone.

"This is all that I have to offer to you and I have to thought of it all circumstances relating to your case, with the same intention of mind as if my life and my sons were concerned therein.

"Notwithstanding that by this way the cure is certainly to be effected, yet nevertheless I fear that in ancient bodyes, especially in the debilitating part of the year, some little kinde of gleeting or moisture (but voide of all malignity) will now and then appear by reason of the weakness of the part and will scarce totally vanish till the return of the warm spring."

Sydenham's chief merit is that he taught the profession to return to Hippocratic methods of careful observation and study. He and Locke were kindred spirits in their manner of looking at the phenomena of disease and in their methods of work. Nothing could be more like Sydenham's plan than that which Locke urges upon his friend Dr. Molyneux, "I perfectly agree with you concerning general theories—the curse of the time, and destructive not less of life than of science—they are for the most part but a sort of waking dream, with which, when men have warmed their heads, they pass into unquestionable truths. *This is beginning at the wrong end*, men laying the foundation in their own fancies, and then suiting the phenomena of diseases, and the cure of them, to these fancies. I wonder, after the pattern Dr. Sydenham has set of a better way, men should return again to this romance-way of physic. But I see it is more easy and more natural for men to *build castles in the air of their own than to survey well those that are on the ground. Nicely to observe the history of diseases in all their changes and circumstances is a work of time, accurateness, attention, and judgment*, and wherein if men, through prepossession or obstinacy, mistake, they may be convinced of their error by unerring nature and matter of fact. What we know of the works of nature, especially in the constitution of health and the operations of our own bodies, *is only by the sensible effects, but not by any certainty we can have, of the tools she uses, or the ways she works by.*"

In another place he makes use of an apt illustration, saying: "Whether a certain course in public or private affairs will succeed well—whether rhubarb will purge or quinquina cure an ague can be known only by experience." Locke in one place gives an excellent estimate of Sydenham (vol. ii., p. 343, Fox-Bourne): "I hope the age has many who will follow his example, and by the way of accurate practical observation which he has so happily begun, enlarge the history of diseases and improve the art of physic, and not by speculative hypotheses fill the world with useless though pleasing visions."

Locke's personal intercourse with Sydenham came to an end in 1683 and Sydenham's death in 1689 terminated a friendship of 20 years which, as Fox-Bourne remarks, "If it may have done much towards inclining the greatest of English philosophers to pursue his early studies in physic, cannot but have also had a considerable effect in quickening the philosophical temper of the greatest of English physicians." With Boyle, also, Locke's relations seem to have been very intimate from the days when at Oxford he was a member of the "invisible college." Boyle was intensely interested in medicine and was perhaps the best amateur student which the profession has ever had. There is no work from which one can gain a better idea of the state of medicine about the middle of the seventeenth century than the "Experimental Philosophy," the second part of which is a review of the state of medicine with many suggestions for its improvement. In 1683 Boyle dedicated his "Memoirs for the Natural History of the Human Blood" to "the very ingenious and learned Dr. J. L.," at whose request he had undertaken the work.

III.—LOCKE'S MEDICAL REMAINS.

Locke's medical remains consist of (1) the record of certain remarkable and historic cases; (2) a group of medical essays; and (3) certain journals and commonplace books which contain memoranda and notes of cases. 1. Of the notable medical cases two deserve full consideration, the hydatid of the liver in Lord Shaftesbury and tic douloureux in Lady Northumberland.

Lord Shaftesbury's case.—The case of suppurating hydatid cyst of the liver is given with unusual fulness and accuracy. I do not remember in seventeenth-century literature a more accurately reported case. It is one of the first instances of operation on hydatid cyst; the consultation on draining of the abscess and the discussion on the propriety of wearing the silver tube give us a unique symposium of medical opinion among the leading consultants of the day, and, lastly, Shaftesbury's tap—as the silver tube was called—has an interest in the satirical literature of the day. No single circumstance better illustrates John Locke as a physician than the elaborate details which he has left on record of his most celebrated patient the first Lord Shaftesbury. This remarkable man is satirised by Dryden in the well-known lines:—

> "Of these the false Achitophel was first;
> A name to all succeeding ages curst:
> For close designs and crooked counsels fit;
> Sagacious, bold, and turbulent of wit;
> Restless, unfix'd in principles and place;
> In power unpleas'd, impatient of disgrace;
> A fiery soul, which, working out its way,
> Fretted the pigmy body to decay,
> And o'er-inform'd the tenement of clay."

Fox-Bourne, commenting on the physical description of Lord Shaftesbury given by Dryden as a "pigmy body," states that this must have been used by poetic licence, as "he was reckoned a handsome man in his day."

In the fragment of an autobiography[1] there is an account of remarkable attacks of abdominal pain when Shaftesbury was only 18 years of age. "At the hunting I was taken with one of my usual fits, which for divers years had hardly missed me one day, which lasted for an hour, betwixt eleven and one, sometimes beginning earlier and sometimes later betwixt those times. It was a violent pain of my left side, that I was often forced to lie down wherever I was; at last it forced a working in my stomach, and I put up some spoonfuls of clear water, and I was well, if I may call that so when I was never without a dull aching pain of that side. Yet this never abated the cheerfulness of my temper; but, when in the greatest fits, I hated pitying and loved merry company, and, as they told me, was myself very pleasant when the drops fell from my face for pain; but then, my servant near me always desired they would not take notice of it, but continue their diversions, which was more acceptable to me; and I had always the women and young people about me at those times, who thought me acceptable to them, and peradventure the more admired me because they saw the visible symptoms of my pain, which caused in all others so contrary an effect."

Though the special malady which brought Locke and Shaftesbury into the relations of physician and patient has an extraordinarily full history, the statements with reference to it in the authorities are somewhat meagre. Fox-Bourne says ("Life," vol. i., p. 197): "But it would seem that Lord Ashley being himself in bad health and suffering from a malady that no physician could explain, and that was every day becoming more painful ..... and having, moreover, formed a very high opinion of the mental and moral worth of his new friend—persuaded Locke to reside with him as physician to his family." Then, again (vol. i., p. 200): "The internal malady from which Lord Ashley had been suffering ever since 1661, and which had been the accidental ground of his acquaintance with Locke in 1666, now caused him great agony, and in spite of all Locke's efforts to alleviate it by medicinal treatment, threatened to kill him. 'My Lord Ashley is like to die,' wrote Pepys on the 19th of June, 1668, 'having some imposthume in his breast, that he hath been fain to cut into his body.' That operation was performed, and Ashley's life was saved, by Locke." It is often referred to as an abscess of the side or as an empyema and is spoken of as following an accident.

In the Record Office there are four transcripts of the case in Locke's handwriting. The most complete is in Latin, of which the following is a translation:—

"*The case of the most Noble Lord Anthony Ashley, Baron of Winburne, St. Giles, &c.*—This most noble lord, aged 45, of very slight build and delicate constitution, had been an invalid for many years, and was exceedingly subject, upon the slightest cause, to a recurrent yellow jaundice. There

[1] Memoirs, Letters, and Speeches of Anthony Ashley Cooper, First Earl of Shaftesbury, Lord Chancellor. Edited by W. D. Christie, 1859, p. 32.

was a painless internal tumour, broad, and slightly projecting, about the anterior region of the liver, and his hypochondria was very apparent to the touch. Although it had been observed 12 years before, the exact time when the tumour first began is uncertain. For since the colour of the skin was unchanged and no swelling was apparent externally, unless the hand were applied it easily escaped the eye; nor through the whole 12 years did it seem to change in the least. The doctors called into consultation on this point, amongst whom were some from the excellent London college, were inclined to the opinion that this firm and unchanging extuberance was not a morbid tumour, but rather some congenital and unusual malformation of the liver. However the patient himself suspects, not without reason, that the tumour first came into existence in the year 1656, especially as at that time ..... he used to fatigue himself overmuch. By too frequent over-exercise his blood became so heated that his skin would immediately be suffused with a deep redness, and his whole body seemed to be inflamed, all which gave rise to a burning fever. From this time on he was conscious of a complete change in the general condition of his body. Whereas before he was troubled more frequently with pains in the left side, and other splenic symptoms, from now on he escaped absolutely free from these troubles, and in their place acquired a constitution prone to other disorders, and especially susceptible to morbus regius.[2] From the prolonged languor brought on by this disease, when his emaciated body and impaired strength would threaten death, he was frequently restored by the timely use of acidulæ, by means of which he obtained relief for one or two years, and was carried through so many vicissitudes of health, scarcely escaping with his life, until last summer. Then, happily, an internal abscess at last broke out, bringing to a head the source of so many disorders. There is one thing here which I cannot pass by, and that is that the patient's head never once ached though more than fatigued by disease. This, however, is not the only marvel displayed by that head.

"During a bad night about the end of May, 1668, he was suddenly seized with excessive vomiting, accompanied by much disturbance. Everything he had eaten in the preceding meal was rejected, still raw and undigested, in repeated vomitings. He was purged next day by Dr. Glisson, the learned physician-in-ordinary. On the following morning he appeared discoloured a rusty red, which the physician tried to remedy with suitable drugs. But although the face seemed to return a little to its proper appearance, so that he could go about the ordinary duties of life, nevertheless, the languor and loss of appetite returned, anti-icterics and chalybeates being administered in vain. Moreover, about the beginning of June, since all the symptoms were running from bad to worse, the physician prescribed a purging pill to be taken at bedtime. When the patient raised himself up in bed to pass his urine about midnight he was suddenly seized about the region of the stomach and liver with a most acute pain which lasted the greater part of an hour and was finally relieved by resting comfortably in bed. When after an hour or two he again sat up in bed the same excruciating pain returned. Again one hour afterwards he got up, and in the same way when he raised himself upon his buttocks the pain attacked him for the third time, and after a like interval left him. Next morning at 8 o'clock, shortly after taking a purging potion he vomited it up mixed with viscid phlegm. After a while he left his bed, his servants taking him in their arms and placing him upright on his feet, so that his body should nowhere be bent. The cathartic had a satisfactory effect and he was purged. However, though he turned his body, he did not dare bend it, lest the severe pain should come on again. In the evening he began to suffer most acute pain in the back about the loins. This ceased after a quarter of an hour, and at the same there suddenly sprung up below the ensiform cartilage a soft tumour the size of an ostrich egg. It was yielding to the touch, but on being compressed it did not for a moment retain any traces of the fingers. The skin was a brown (?) colour. There was hardly any pain, and no inflammation. This tumour could not be broken up by the drugs which were administered for six or seven days. Then physicians and surgeons were called into consultation and on June 12th it was opened by the application of cautery. This fact is worthy of observation: before the opening of the tumour a somewhat tenacious and flexible plaster fastened itself so firmly to the skin at the border of the tumour that it could not be torn away without leaving behind a large part of its substance; while, on the other hand, the top of the tumour, about the width of an English half-crown or more, was not even discoloured by it, nor was the plaster at all adherent in that part." The daily record of the case is in English.

"The 12th of June, 1668, in ye morning a caustick was applied and ye same opened in ye afternoon, at wh. dressing besides a large quantity of purulent matter, many bags and skins came away. The like hapned the next day (being Saturday) both in ye fore and afternoon. On Sunday morning (being ye 14th) at ye first drawing out ye tent, a great quantity of yellow choler gushed out and two or three sluffs, wth some tollerable matter at ye latter end, for ye evening only a little matter came forth. And ye like on Monday both morning and evening.

On Tuesday morning a great quantity of matter came forth, with many bags to ye number of at least 80, for ye afternoon little or nothing, and so also on Wednesday.

On Thursday morning we had a new flux, both of matter and skin, in ye afternoon nothing considerable.

A Friday a wax candle was put deep into ye abscesse, and after ye drawing it out some matter and divers sluffs proceeded, in ye afternoon nothing.

20. On Saturday morning and eveninge some matter followed and above 10 bags. The passage could not be found.

21. On Sunday a wax candle put in of four and three-quarter inches and there left until evening, then drawn out without matter.

22. Monday morning. No running: a sponge tent put in for ye afternoon ℥iii matter, bags above 20.

23. Tuesday morning. No running, ℥i of injection for ye evening ℥iii or iiii injection, part whereof wh. some matter came away and about 10 bags. About two hours after more came and so ye next morning, at my Lds. rising and about 10 bags at both times.

24. At ye dressing in ye morning, nothing came. Of injections ℥v. or vi., about three in ye afternoon a great flush brought away about 50 sluffs, whereof most were bags (but not red as formerly by reason of the injection) and some like jelly. At ye evening dressing no running. A glove thick spung tent left in ye orifice.

25. Morning. It ran of itselfe a little before dressing. Injection being made there came forth much thin digested looking matter, somewhat fœtid with about 12 bags, whereof one very large. A spung tent put in. In ye evening injection, which came away next morning before dressing wth four or five sluffs.

26. A Friday morning, injection was made & some thin matter came forth. A short spung tent put in: in ye afternoon some matter, but no sluffs.

27. Upon ye drawing out ye spung tent matter followed wth six or seven sluffs. Of injection being made whereof much stayed behind, in ye afternoon ye spung tent being pulled out, a great flush of matter followed, wth almost 20 sluffs. Of injection was made whereof a great part staid in. A hemp tent was put in. Some matter came out in ye night & left a yellow tincture on ye cloths.

28. Pulling out ye tent, some yellow matter came out wth three or four skins. A spung tent put in. The like issued in ye afternoon. Of injection was made & a flax tent put in.

29. It ran in ye night. Next morning after injection a flush of yellowish matter issued wth 18 sluffs. A spung tent put in, after injection, whereof a considerable part remained. In ye afternoon upon ye drawing out ye spung tent, much matter gushed forth, being somewhat fetid, with 12 or 14 sluffs and bags. On injection being made ye same came freely forth, tinctured with matter. A flax tent was put in.

30. In ye morning little matter came out, yellow tinctured, wth one or two skins. A spung tent was put in. For ye afternoon a little matter, wth two or three small sluffs. A flax tent put in.

July 1st. A Wednesday morning. After a second injection much yellow matter came forth wth three or four yellow sluffs, & at last a considerable quantity of whitish well digested matter came out. A flax tent put in. At ye pulling out whereof in ye afternoon some thin matter proceeded & after injection more but little discolored & only two sluffs. A flax tent put in. My Ld. complained of a little paine, lower towards his right side.

2. Upon ye opening on Thursday morning, some little

[2] Jaundice.

matter came away, but not fetid, rather of ye smell of wine, wth one small sluff. A spung tent put in. In ye evening little came forth, no bags. A spung tent put in wth one injection.

3. The spung tent being pulled out two yellow bags gushed out, without any considerable injected matter, and afterward five or six small sluffs with a little tinged liquor. Injection was made and spung tent put in.

4. Saturday morning. Upon pulling out ye tent little proceeded. After ye putting in ye small catheter & injection made considerable quantity of matter issued. A spung tent was put in; for ye afternoon a large quantity of well digested matter came out. No injection made. A spung tent put in.

5. Yellow matter came forth with four or five sluffs, whereof one great one suckt into ye end of ye siphon. After injection a spung tent put in, wh. in ye afternoon being pulled out a good quantity of matter followed, well digested, especially through ye small catheter and siphon. A few sluffs came out, one great one. A spung tent put in.

6. In ye morning ye small catheter & siphon were put in; divers sluffs, some after injections, came forth, whereof three or four large ones. A hollow tent was put in upon ye pulling out whereof a sluff came forth, wth divers very little ones; more seemed to stop ye passage but could not issue, because ye thinner parts did run out before through ye hollow pipe. Neither did injection promote their coming forth, though some matter of a brownish colour came out.

7. Much yellow matter ran in ye night and some more this morning, with two or three sluffs. Injection was made, whereof ye greatest part came forth. A spung tent was put in. At night a sluff stuck to ye tent at its pulling out & 4 or 5 more where 2 very yellow came afterwards. No injection. A silver hollow tent put in.

8. It run very much in ye night, ye napkin was stained with yellow and green, one bag. A spung tent put in. In ye evening 4 or 5 sluffs, some matter. An open pipe put in.

9. Little run all night and sluff stopt ye pipe. One or two more followed, a considerable quantity of atheromatous matter. At night two sluffs; very little atheromatous matter.

10.[3] A great running through ye hollow pipe, two or three sluffs. The matter at last being whiter and more even than before. Much running till night. Some sluffs. Injection made and a hollow pipe put in, after most of ye injection was discharged. After this a pain supervened in my Ld's. back about ye region of his liver, & at night he vomited; and had a cold shivering; wh. seemed to proceed from somewhat too liberal diet that day & catching some cold.

11.[3] After a little sweat in ye morning, my Ld. was better. He was not drest till ye afternoon: ye ulcer having very much discharged itselfe in ye meantime; wth some few sluffs.

12.[3] A little matter wth few sluffs. Injection made. A hollow pipe. At night run very little. Two sluffs.

13. Not drest in ye morning. Ran much. At night little matter, 2 or 3 sluffs.

14. It ran much yellowish gleet and matter in ye night. But upon ye opening no matter nor sluffs issued, though injection were made. At night one yellow sluff & a little good whitish matter.

15. In ye night it ran much yellow matter & about six small sluffs. Injection made. No meeting in ye afternoon.

16. Upon opening much running of yellow matter appeared, with 4 or 5 yellow sluffs.

17. A large flux of yellow liquid, wth 4 or 5 yellow sluffs, whereof two large ones sticking in ye pipe. Injection made.

18. It had run somewhat copiously before dressing, wth ye ejection of one very small yellow bag. Injection being made brought forth some matter & a considerable quantity of very yellow liquor.

19. Little running before dressing, after it none, no injection.

20. Small quantity (?) of lesse yellow liquor run before dressing, 4 or 3 sluffs. Injection made.

21. Yellow liquor has continued running. No sluffs nor injection.

22. Some pretty laudable yellowish matter came out upon dressing. Injection was made.

23. A little matter issued upon coughing. No injection.

24. The like today.

[3] The sympathetic powder made use of.

25. A few small sluffs. Little matter & not yellowish. No injection."

From the long-standing character of the tumour and the character of the material which escaped—the innumerable bags—there can be no doubt that the disease was hydatids of the liver, which, remaining quiescent from 1656, had, as is so often the case, suppurated. It is one of the first instances on record in which the abscess was opened. The use of the sympathetic powder on the 10th, 11th, and 12th shows how strongly popular feeling had affected the profession.

Naturally, from the prominent position of the patient and the strange character of the disease, the case attracted unusual attention. The point that concerned Lord Shaftesbury himself most acutely was whether it was better to remove the silver drainage-tube or to keep it in. To get the opinion of the faculty on the subject, he sent, with Locke's assistance, a circular letter containing the following questions:—

"1. Which is most advisable, to resolve to keep it constantly open, or to heal it up as soon as conveniently may be?

2. Whether, if it be healed up at all, one of these two dangers is not like to follow; either a new collection of matter, the imposthume lying below ye orifice by which it vents itself, or a feaver upon stopping of so considerable an issue?

3. Whether if it be to be healed up at all it be not necessary to keep it open as long as any flux of matter comes through the pipe more than would be from an issue of the Depth and Bigness of ye pipe?

4. Whether the pipe that is now in be not of the fittest length and bigness to be worne constantly to keep it open.

5. Whether whilst it is best open it be not best to dresse it but once in two days, especially in cold weather?

6. Whether whilst it is best open it be convenient to use any Injection, how often & of what sort & to what purpose?

7. Whether if it be kept long open it will be in danger of growing in a worse condition than a simple issue of that depth, either by turning to a foule ulcer or a fistula or any other way, and if there be any such danger how to be prevented?

8. Whether the bare keeping in a Silver pipe will, without paine, keep it open as long as one pleases?

9. Whether I may travel in a coach, ride on horseback, boate, or use any such exercise safely with a pipe in of this length?

10. Whether if it be kept long open Nature will not in time so fortify the parts about the end of the Pipe as to make the danger it may bring by rubbing upon them in any exercise, very little or none at all?

11. Whether during the time it is kept open frequent purgeing be necessary and how often?

12. Whether if it should be kept always open it is not to be feared that a constant flux of matter from it, especially if it should continue to be of any considerable quantity, may very much weaken and emaciate the body, & how to be prevented." (Handwriting not Locke's.)

To this circular there are among the Shaftesbury papers the replies of Locke, of Sydenham, of Glisson, of Sir George Ent, of Micklethwaite, of Timothy Clark, and of the Abbé Beaupreau of Angers, an eminent French physician. With the exception of Clark, who urged that the issue should be healed, the opinions agree in the main. They are too long to quote at length, but those of Locke and Sydenham are of sufficient historical interest to be given.

"*Consilium Abscessus* (*Locke*).

1. It is better to heal it up as soon as it may safely be done. Because it is not convenient to have a constant issue of that depth in that place if it might be remedied.

2. To secure from the danger of a new collection of matter I think it will be

3. Convenient not only till the flux of matter be no more than may be well expected from a flesh issue of that depth, but after it hath gradually decreased to that small thing, it be kept open at least three or four months at what time soever the flux come to that low ebb, but if it happen after Xmas, as in the spring, that it be kept open till the beginning of the next winter, that the flux be constantly and warily observed, and that it be sometimes diligently searched, so that by these ways all the security possible may be had that there is not the least sore or hollow left

behind unhealed up. And to prevent a fever or other disorder in the blood upon its stopping up, it will be necessary then and sometimes after to use a spare diet with frequent purging, till Nature, used to the convenience of this discharge, may by degrees accustom herself either to master or vent her humors some other way.

4. The pipe now in I conceive to be of the proper length and bigness that may be to keep it open, which is not at all to be altered or shortened till you resolve to heal it up, for if you shorten it sooner you heal it sooner too, for the flesh will certainly grow up still & close the end of the pipe, though all is not secure behind. Nor do I see what harm the pipe can do in touching the bottom of the issue more than the sides, where nature equally endeavors to generate flesh to fill up the cavity as it does at the end. And if the pipe upon any motion of the body should perhaps grab a little (which I believe it will not be very apt to do) all the danger will be the filching a little blood from this new-grown flesh (for there can be no great vessels in that which may be in danger to be broken), which is not of half so much hazard, if any at all more than the pain, as to let it close up but one minute before the time. And to prevent any injury from the stiff silver pipe you may in travel or exercise use a wax candle tent exactly of the length and thickness of the silver pipe.

5. In cold weather once a day at most will be enough to dress it, and then the air of the room where it is dressed to be made as warm as conveniently may be.

6. In cold weather an injection warming and strengthening and resisting of putrefaction to prevent the harm that may come from the cold air may be convenient to be made use of as often as it may be dressed, but in warm weather may be wholly omitted. And certainly all the year once a week or fortnight an injection to prevent the growing of a fistula, putrefaction and a fistula being the two great evils that are to be feared and prevented in the long keeping of it open, which is also an answer to the

7. Seventh.

8. I suppose the silver pipe that is now in may be kept in as long as one pleases without danger or pain.

9. Travel & exercise with a tent of wax, or any such matter as will resist the closing of the sides but be pliant to the motions of the body, may be not only safe but usefull.

10. The longer the parts are used to the pipe the less danger will be from its hurting it, the parts accommodating themselves to the figure of the pipe which it constantly uses, and by degrees growing stronger and harder where they are pressed by it.

11. Whilst there is a design of healing of it up purging once a fortnight may be useful to divert the humors from flowing to that part, but else in respect of the health of the body I suppose there would be less need of purging during this vent (?) than at other times, and perhaps a care of diet will with more advantage to the health substract the humors than purging, which being constant may have other inconveniency;

Or, 'tis to be hoped that whilst by careful dressing and injecting the wound is kept in good condition, and the constitution of the body in good temper by a regular diet, the flux will rather advantage than injure the health and strength of the body."

Sydenham's opinion is one of the few papers in his own hand. (Some of the words are very difficult to decipher.)

"I reccomend it by noe meanes saff for his Lordshipp to stopp up the abscess, triall having once bin made of the unsuccessfuliness of doing it & the flux of matter as yet seeming too much in proportion to the canale, and I judge it better to keepe it open with a silver pipe then a wax candle, in regard that from the use of a candle the matter will have the less opportunity to issue out & consequently the passage choak up. But I think 'twere better that the pipe were shorter because by the present length thereof his Lord'ship is liable to dangerous accidents from any unequal motion of the body which in process of time may easily happen from riding in a coach, stouping or the like: nor does it seeme to be suspected that the matter will not worke itself out when the orifice shall be kept open. I conceave it may somewhat contributt to the discharge of the matter if my Lord shall lie on his left side or much as he can in regard the imposthume is depending it he shall lie with his upper parts low. I hold it very useless to use irrigations of any sort because the cavity being depending, the liquor how agreeablesoever in other respects will by lodging itself in any little cavities beget new impostumortions (?) to which those irrigations administer matter and by this means the cavity still enlarged. I should thinke that a drying drinke, constantlye kept to for ordinary drinke would be more conducible to the drying up of this flux of matter and sweetening the whole mass of blood and humors than anything whatsoever. Nor do I conceave that my Lord's spare habitt of body may discourage from this course, but rather contrary when 'tis notoriouslye known that on drying diett though used with greater severity than 'twill be necessary to put my Lord upon, hath after a while rendered bodies that before were very emaciated now plumper and vigorous. But what 2 draughts in a day can signifie and those too of a liquor so compounded that the greater respect is had to the oncerteyne & constitutell virtue of & the lesser to the certeyne and sensible qualitie of Driers I canot imagine.

This therefore with submission to those who know more I should advise.

That nothing be done to the part saveing the use of a pipe that may be made somewhat shorter or to be lengthened with a wan (?) handle, that it be dressed once a day if the matter be much, once in 2 days if little.

That of the stronger sort of liquor halfe a pint be taken hott every morning 1 hour before his Lordship riseth and the same quantity at night as soon as he is in his bedd.

That the smaller liquor be constantly drunke at his meales and at other times.

That he purge or take a clyster every 5° or 6° day.

Lett his Lpps. diett be in proportion to this way att least lett be avoided."

Then follow two prescriptions of the stronger and smaller liquors. The French Abbé, whose opinion is also given, was evidently very much impressed with a full report of the case as narrated by Locke. He says: "I can hardly determine myself whether I ought to admire more in it the wise and admirable proceedings of my Lord's physician or the exactness of the author of the relation both for the elegance of his style and his judicious remarks with which he hath illustrated his narrative."

Locke made inquiries everywhere of his professional friends as to the existence of similar cases, and among the papers there are three very interesting reports, one of a case of empyema opened by making an issue; another the case of James Oddy sent on Jan. 22nd, 1668, by T. Batteson, was in all probability a hydatid cyst, as when the side was opened matter like fish skins and white of eggs to the number of 40 and to the amount of one quart came out. The greater ones had lesser ones in them, like the seeds of a lemon. A third report was sent to Locke by Thomas Strickland of a man who fell into a languishing with great pain in his side and stomach, which persisted for a year or so. When death was expected a great swelling arose in his side with infinite torment. A neighbour cut upon the head of the swelling with a penknife, "then came out several blathers like winde eggs, some as large as turkey eggs, others as hen eggs." It was open for a year, in which time over 400 of these came out. He afterwards regained perfect health.

The satirists of the day made great sport of the silver pipe which Lord Shaftesbury continued to wear for the rest of his life. The wits of the day called a sort of vessel with a turncock constructed for holding wine a *Shaftesbury* and his common nickname was "Tapski." Duke, an imitator of Dryden, describes him under the name "Antonius" in his lines—

> "The working ferment of his active mind
> In his weak body's cask with pain confined
> Would burst the rotten vessel where 'tis bent
> But that 'tis tapt to give the treason vent."[4]

In Act III. of Dryden's *Albion and Albanius* the King was represented by a huge drawing of a man (meaning Shaftesbury) and several fanatical heads who sucked poison from him which runs out of a tap in his side. And again, in a mock account of an apparition stated to have appeared to Lady Gray, it says: "Bid Lord Shaftesbury have a care of his spigot; if he is tapt all the plot will run out."

A satire called "The Hypocrite," written by Carryl, concludes thus:

> "The silver pipe is no sufficient drain
> For the corruption of this little man."

Shaftesbury appears to have enjoyed very good health and lived a very active, energetic life. I find a statement

[4] Anderson's Poets of Great Britain, vi., p. 628.

("Raleigh Redivivus," page 48) that in the year 1672 it (the abscess) was "opened by Mr. Knolls, the surgeon, under the direction of Dr. Willis, and an issue inserted for the regular discharge of the humor." This probably refers to a subsequent blocking of the tube. As to his death, Christie in his Life (vol. ii., p. 455) says: "He was taken ill with the gout, from which of late years he had often suffered, about the end of December. The malady flew to his stomach; he suffered excruciating agonies; and he died in the forenoon of the 21st of January" (1683). Missal "mentions of one of the natural causes of Shaftesbury's death the sudden cessation of the discharge from his internal abscess," from which we may understand that he continued to wear the silver tube.

Lady Northumberland's case.—As this has already been published in full in the *European Magazine*, and as there is a note upon it in THE LANCET,[3] I will only give a brief abstract. The description is given in letters to his friend Dr. Mapletoft.

Letter IX., Dec. 4th, 1677. After an apology for so unwelcome an occasion of writing Locke says: "On Thursday night last I was sent for to my Lady Ambassadrice, whom I found in a fit of such violent and exquisite torment that (though she be, as you know, a person of extraordinary temper, and I have seen her in the course of this distemper endure very great pain with a patience that seemed to feel nothing) it forced her to such cries and shrieks as you would expect from one upon the rack, to which I believe hers was an equal torment, which extended itself all over the right side of her face and mouth. When the fit came there was, to use my Lady's own expression, as it were a flash of fire all of a suddaine shot into all these parts, and at every one of those twitches which made her shriek out her mouth was constantly drawn on the right side towards the right ear by repeated convulsive movements which were constantly accompanied by her cries. This was all that appeared outwards in these fits according to the exactest observation I could make, having had but too many opportunities to do it. These violent fits terminated on a suddaine, and then my Lady seemed to be perfectly well, excepting only a dull pain which ordinarily remained in her teeth on that side and an uneasiness on that side of her tongue which she phansied to be swollen on that side, which when I looked on it, as I often did, had not the least alteration in it in colour, bignesse or any other way though it were one of her great complaints that there was scalding liquor in her fits shot into all that half of the tongue. She had usually a precaution of the fit by a little throbbing in the upper jaw just over against it. In all this time of her being ill she has not found the least pain in all the other side of her face and teeth, which has so wholly possessed the right side that it went even to the very tip of her tongue and the last tooth before on that side. When all this torment was over there was not the least appearance of any alteration anywhere on her face, no inflammation or swelling in her mouth and cheeke; very little defluction of rheum more than what the disturbance of those parts in these fits might cause. Speaking was apt to put her into these fits; sometimes opening her mouth to take anything or touching her gums, especially in the places where she used to find those throbbings, pressing that side of her face by lying on it were also apt to put her into a fit. These fits lasted sometimes longer, sometimes shorter, were more or less violent, without any regularity and the intervals between them at the longest not half an hour, commonly much shorter."

Locke then describes the treatment, topical anodyne applications to the gums, which gave relief. The next day the fits returned and she was purged. Bleeding was considered, but she had been so often and so much blooded on a like occasion this summer without help that Locke thought best not to do so again. The next night she took a quieting cordial, but during the first part had the fits very severely. He says, "I wish with all my heart you were here," as Lady Northumberland had had so little success with the French physicians that she would not call them. He asks "whether you do not think this to proceed from some affection in the nerves in the place where the tooth was drawn, which draws all the rest into consent and convulsive motions on this side?" At one o'clock in the afternoon he writes again that a blistering plaster has been placed on the back of the neck (interscapulus). "She has, especially when the fits are most violent a drinesse in her lips more than ordinary." On Sunday night he writes with great satisfaction telling of her improvement, but he asks for the "best advice you can get." On the 22nd he writes: "On reading our friend's [Sydenham's] letter I was ready to cry out, 'The spirit of the Prophets is upon the sons of the Prophets,' I having in what I have done here not only proceeded by the same method, but used the very remedys he directed as to the maine." He speaks of the diet and says that he had advised an open-air life to strengthen the genus nervorum, as he thought that hysterical vapours increase the tumult and disorders in the nerves, in which he suspects an ancient fault as she has extreme and violent itching in the gums on that side long before the fits.

[3] THE LANCET, vol. ii., 1828-29, p. 367.

IV.—MEDICAL WRITINGS.

These consist of fragmentary papers, the chief interest of which to-day is that they are from the pen of the great philosopher. They are among the Shaftesbury papers in the Record Office and I have had them copied with a view of subsequent publication. They are: (*a*) *Ars Medica* or *De Arte Medica*, an introduction to a treatise on the philosophy of medicine. One cannot read the fragment without feelings of deep regret that the design was not carried out. The scope of the intended work may be gathered from the following summary: "But, not to expatiate into the large field of natural philosophy, where perhaps the foundation of the mischief was first laid, I shall, according to my design, confine myself at present to that branch of it which immediately concerns the health of men; and, in physic, shall consider: 1. The present state of the faculty of medicine as it now stands, in reference to diseases and their cure. 2. The several degrees and steps whereby it grew to that height it is at present arrived to, which I suppose are these following: (1) experience; (2) method, founded upon philosophy and hypothesis; (3) botanics; (4) chymistry; (5) anatomy; in all which I shall endeavor to show how much each hath contributed to the advancing the art of physic, and wherein they came short of perfecting it. 3. What yet may be further done towards the more speedy and certain cure of diseases; i.e., by what means and method the practice of physic may be brought nearer to perfection." (*b*) *Anatomia*, a longer paper, in which Locke contends "that nature performs all her operations in the body by parts so minute and insensible that I think nobody will ever hope or pretend even by the assistance of glasses or other inventions to come to a sight of them." From the gross parts he thinks not much can be learned. We "see not the tools and contrivances by which nature works." "Though we cut into the inside we see but the outside of things and make but a new superficies for ourselves to stare at." The paper is a forcible statement against the hope that anatomy can ever show the true essential causes of disease. It is quite possible that the article was prepared at Sydenham's suggestion or for his use, as at the top of the page in Sydenham's handwriting is the sentence: "Others of them have more pomposity and speciously prosecuted the promoting of this art by searching into the bowels of dead and living creatures, as well sound as disease, to find out the seeds of discharging them, but with how little success such endeavors have been or are likely to be attended I shall here in some measure make appear." (*c*) "Respirationis Usus," a short paper on the subject. (*d*) "Tussis," an essay on coughs, in which subject Locke took a personal interest. Here, again, is evidence of Sydenham's hand in a brief marginal note on cures done by riding in consumption and morbi obscuri. (*e*) A dedication and preface to a proposed work on small-pox by Sydenham. From the outset of their friendship Locke took a deep interest in the writings of Sydenham, and, as I have mentioned, he contributed a Latin poem in praise of him and of his methods to the second edition of the "Methodus Curandi Febres" (1668). It would appear that about 1670 Sydenham contemplated writing a separate work on small-pox, in the treatment of which he had had great success, but the physicians were at first very hostile to his new plan. Among the Shaftesbury papers are a dedication and a preface written by Locke. Sydenham had shared with his friend the professional care of the family of Lord Ashley and had tried with happy results his cooling regimen in cases of small-pox. In the dedication he (or rather Locke) says: "At least, my lord, I thought it reasonable to let you see that I had practised nothing in your family but what I durst own and publish to the world, and let my countrymen see that I tell them nothing here but what I have already tried with no ill success on several in the family of one of the greatest and most eminent personages amongst them." The

preface is a sharp and stout defence of the new method, in which it must be confessed Locke does not spare the colleagues of his friend. "How much some of my own faculty have fomented and increased these reports, they themselves know, and with what design I leave it to their own consciences to tell them, only they must give me leave to say it would have become them out of common charity as good men, as well as out of an obligation to improve their art and save men's lives as physicians, upon the first intimation of an unusual method of curing so common a disease as this is, to have inquired more particularly of the way, observed the circumstances, and informed themselves of the events before they cried it down as dangerous and fatal, and frighted all that came within their reach from an enquiry into or trial of his method by the abhorrency they had given them against so bold and hazardous a practice." Evidently Sydenham smarted under the calumnies and misrepresentations and the preface speaks of "the greatest indignities beyond almost the sufferance of a man, and the endangering not only of my reputation and livelihood, but even my life itself." The article is chiefly valuable from the account which it gives of the steps by which Sydenham was led to adopt his cooling treatment. Neither dedication nor preface was ever used. The projected work did not appear and many years later the "Observationes Medicæ," which contained his matured experiences, was dedicated to Mapletoft and another preface was used.

V.—JOURNALS, LETTERS, AND COMMONPLACE BOOKS.

A keen observer, a constant note-taker, and of most neat and accurate literary habits, Locke has left a large mass of manuscript, which has been carefully searched and sifted by Mr. Fox-Bourne, in whose Life, as well as in that by Lord King, there are many letters and extracts illustrating his work as a physician. The letters to Mapletoft about Lady Northumberland have been referred to. Of the journals those of his Holland sojourn, which are said by Fox-Bourne to contain much of medical interest, I have not yet seen. In the British Museum is a very characteristic journal in which one may follow Locke's medical work for the year 1679. It is bound with an *Ephemeris* or Calendar of the year. He was in Paris during the early months. As usual he was interested in bills of mortality and he states (Jan. 16th) that the deaths in Paris were from 19,000 to 20,000 a year. He makes a note to ask if the deaths of Quakers, Anabaptists, and Jews are recorded in London. On April 12th he comments on the handbills set up about town with a receipt to kill lice. There are many notes on the treatment of diseases and receipts, to the collection of which he seemed very partial. He queries whether the sympathetic powder could be of any use in dentium dolor, indicating that he still had a lingering belief in it. There are many notes on various topics and memoranda about books, &c. On May 8th he sailed from Calais. On June 4th are brief notes of a Mr. N., sick of a fever, whom he bled, and afterwards jaundice appeared. Notes on vomiting, diseases of the eye, icterus, hernia, hysteria, hypochondria, rheumatism, mania, and tussis occur in June. On August 18th he was sent for in consultation in the case of Mr. Beavis of Olanligh, Kent, and for the next six weeks the Journal is very full, containing a detailed account of the symptoms of Mr. Beavis and the treatment, many notes on the practice of Dr. Jacob, the attending physician, and a characteristic description of two attacks of fever with which he was himself attacked. Mr. Beavis had a long illness, possibly typhoid fever, and it was not until the end of September that Locke left for London.

The Bodleian Common-place Book with the Anecdota Sydenhami.—This is a small folio, bound in parchment, which originally contained 400 pages, of which 247 are torn out. Dr. W. G. Greenhill published a part of the manuscript in 1845 as "Anecdota Sydenhami," and the following extract from the preface may be quoted: "They are taken from a MS. in the Bodleian Library at Oxford (Rawl. C. 406), very neatly (and for the most part very legibly) written, apparently about the end of the seventeenth century. The name of the writer is not mentioned nor is anything known of the history of the MS., except that it once belonged to Dr. Richard Rawlinson and forms part of the collection of MSS. bequeathed by him to the University of Oxford about the middle of the last century. At the beginning of the volume (of which about two-thirds have been torn away) are these words: 'Extracts of Sydenham's Physick Books and some good Letters on Various Subjects.' This is the whole of the *external* evidence respecting the genuineness of the following Anecdota; and perhaps, if there were nothing more to say in their favour, it might be doubted how far the editor was justified in giving them to the world under the sanction of the name of Sydenham: the *internal* evidence, however, is much more conclusive, and indeed to his own mind perfectly satisfactory. The writer professes to have been acquainted with Sydenham himself, and to have originally written the following Notes, partly from his dictation in the years 1682, 1683, and partly from some of his MSS. written chiefly in 1670. These Notes he appears to have revised and written out correctly in their present form *after* 1685 (as he refers to the edition of Sydenham's Work published in that year), and (if the editor's conjecture at p. 69 be correct) *before* 1692, as that is the date of the first edition of the *Processus Integri*."

Apparently it was not until Mr. Fox-Bourne examined the manuscripts that it was recognised as belonging to Locke, whose handwriting is most distinctive. While largely made up of extracts from Dr. Sydenham's physic books, the *excerpta ex ore Sydenhami* dated 1682–83, show the maintenance at this date of an intimate professional relationship between the two great men.

The other medical papers in the volume illustrate the wide scope of Locke's inquiries. There are statements about the Peruvian bark and the best methods of its preparation. But the chief interest after the Sydenham notes relates to a sort of collective investigation which Locke instituted on public health. He seems to have had a deep conviction that much good would follow a careful study of the bills of mortality. His circular letter contains the following inquiries (MS., p. 68): "1. What bills of mortality are kept in foreign countries, either as to the diseases of which persons die, or the number who die weekly or yearly in the most capital cities or towns of Europe or other parts of the world, as Paris, Madrid, Amsterdam, Venice, Hamburg, Rome, Constantinople, Smyrna, Dublin, Edinburgh, &c., as also in New England, Barbadoes, Jamaica, and other Plantations. 2. The aire of different countries, with the temper and alteration of the same at the different seasons of the year, and the diseases those countries are subject to and the time when. 3. The opinion physicians have of Jesuit's bark, and the best account they can give of it. 4. The esteem which physicians have had of Dr. Sydenham and his works. 5. The order observed in foreign countries as to physicians, surgeons, apothecaries and herbalists for the improvement of travellers and young students."

There are answers from several correspondents. Dr. Willoughby of Dublin (April 17th, 1691) gives a tabular account of the bills of mortality between 1682–90 (inclusive), and a description of the air of the country. He speaks of the Peruvian bark as "the only specific I know in nature." Of Dr. Sydenham he says, "he has been very honest in rescinding from Physick all the unnecessary pomp of alteratives and preparatives and reducing it to the use of the grand remedies which in Physick do justly fill both sides of the loafe." In another place is an account of Dr. Willoughby's proposal for the improvement of agriculture in Ireland, the important part of which was that every proprietor who will not improve his waste land shall make over four-fifths of it to the Crown. There is a brief statement of the Amsterdam bills of 1691 and 1693, and an account of Dr. Bett's proposal to the Lord Mayor for the improvement of the returns in London. There are letters from James Young of Plymouth about various diseases, and one from Dr. Eales (?) giving an account of Dr. Morton's books, in which "he has improved the hints of our good friend the great Dr. Sydenham admirably well." Dr. Patrick Dun sends a full statement about the mortality bills of Dublin, and pp. 93 to 96 of the MS. contain *in extenso* the death-rates from Jan. 1695 to April, 1698. Pages 110 to 357 are torn out, but from the index, pp. 369–371, we can glean the contents of the missing leaves—books whose authors are unknown, "books to be wrote," and "books wrote in defence of the murder of King Charles I.," with a long list of the authors, and about the "Eikon Basilike" and the various controversies upon it, extending from pp. 199 to 236.

Though qualified and deeply interested in both the science and the art of medicine Locke never became, as Fox-Bourne says, "in any orderly way a physician." Until he left England in 1683 "he was still waiting for an opportunity of devoting himself steadily to his favourite occupation. He was still generally spoken of by his friends as Dr. Locke,

and he still regarded himself as before everything else a doctor." Hereafter questions of philosophy, finance, education, trade, theology, &c., occupied his busy life, but through it all, and to the very end, there are references in his letters and journals to show that his first love was not forgotten. In the memorable and oft-quoted letter to Dr. Thomas Molyneaux in praise of Sydenham's method, Jan. 20th, 1692–93, he speaks of himself as one who wishes well to the practice of physic "though he meddles not with it," yet in the same year we find him prescribing for a friend's wife. In 1694 he is corresponding with Dr. Hans Sloane on medical matters. In January, 1697–98, King William consulted him, believing that they suffered with similar diseases. In 1701 he writes again to Sloane about a patient with an obstinate fever, and in the following year he gives very wise advise to his old friend Lomborch, who was ill. Evidently Locke's clear, strong judgment was valued by his friends in all relations of life, and as Somers and other politicians turned to him for instruction in questions of trade and finance so his friends and others insisted upon utilising his medical knowledge. Sydenham, Boyle, Thomas, Mapletoft, and Molyneaux had been his intimate associates. In Montpellier, in Paris, and in Holland he had been a welcome guest in medical circles, and in London we have met him in consultation with the most eminent practitioners of the day upon a most important case and handing in a written opinion as their colleague and equal.

For each one of us there is still a "touch divine" in the life and writings of John Locke. A singularly attractive personality, with a sweet reasonableness of temper and a charming freedom from flaws and defects of character, he is an author whom, liking at the first acquaintance, we soon love as a friend. Perhaps the greatest, certainly, as Professor Fowler says, the most characteristic, English philosopher, we may claim Dr. Locke as a bright ornament of our profession, not so much for what he did in it, as for the methods which he inculcated and the influence which he exercised upon the English Hippocrates. He has a higher claim as a really great benefactor of humanity, one of the few who, as was so finely said of Isocrates, "reflected the human spirit always on the nobler side." One of Locke's earliest writings was a translation for Lady Shaftesbury of Pierre Nicole's Essays, in one of which, on the "Way of Preserving Peace with Men," Locke seems to have found a rule of life which I commend to you: "Live the best life you can, but live it so as not to give needless offence to others; do all you can to avoid the vices, follies, and weaknesses of your neighbours, but take no needless offence at their divergences from your ideal" (Fox-Bourne).

The Hunterian Lecture

ON

THE CLINICAL STUDY OF HEART DISEASE.

Delivered before the Hunterian Society on Oct. 10th, 1900,

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GENTLEMEN,—The great man whom your society commemorates had made many observations on the vascular system in men and in animals, some of which are preserved in his interesting "Treatise on the Blood, Inflammation, and Gunshot Wounds," written in 1793. He describes a patient who from boyhood had suffered from shortness of breath, palpitation, attacks of venous engorgement, and irregular action of the heart, and who died from dropsy. Post mortem John Hunter found the aortic valves to be thick, hard, and contracted, and he remarks: "This diseased structure of the valves accounts for every one of what may be called his original symptoms, and was such as to render them [i.e., the valves] of very little use; the blood therefore must have fallen back into the cavity of the ventricle again at every systole of the artery." He discusses whether this state of the valves was a natural formation or a disease, and points out the wide effect on the circulation of such a condition. "It may be difficult," says Hunter, "to account for the increased size of the heart, whether it was a mechanical effect, as the blood would be thrown back into it at every systole of the aorta and diastole of the heart, or whether it arose from a particular affection of that viscus. The first idea is the more natural, but it is not necessary that the cause should be of this kind, for we see every day enlarged hearts where the symptoms have been somewhat similar, and yet no visible mechanical cause existed, and indeed it is a common effect where there is an impeded circulation." The account shows us how far a case of heart disease was understood by Hunter, and his views may be taken as the most advanced of his time. He had perceived how valvular disease led to palpitation, shortness of breath, venous engorgement, and dropsy, and he suspected, but was not sure of, the causal relation of aortic valvular disease to hypertrophy of the left ventricle. He was clearly not familiar with affection of the aortic valves as a very common disease; he does not seem to have considered whether the mitral orifice admitted regurgitation, as it very likely did in such a case and in some of the other examples of hypertrophy which he mentions; he knew nothing of the association of renal disease with hypertrophy of the left ventricle; and of course he was unacquainted with the method of ascertaining valvular disease by auscultation of the heart.

Hunter gave all the time at his command to the original observation of nature and did not pay much attention to the books of the past or of his own time. He had probably never read the account of an enlarged heart in which extensive disease of the aortic valves was found post-mortem which Dr. James Douglas had given in the "Philosophical Transactions" for 1716. Douglas had heard during the patient's life a loud sound proceeding from the cardiac area, the systolic murmur of aortic stenosis with which we are all perfectly familiar. Had Hunter read this observation and considered it in relation to his own observation on disease of the aortic valves it does not seem improbable that he might have anticipated part of Laennec's subsequent discovery and have initiated the auscultation of the heart and elucidated the meaning of valvular murmurs. Douglas has not, I think, received sufficient honour for his remarkable observation. He was a man of great ability, great industry, acute observation, and extensive learning. He died in 1742 and left behind him numerous medical, pathological, and anatomical observations[1] of a high order, some botanical works of interest[2] and an admirable bibliography and summary of all anatomical writers from Hippocrates to Harvey.[3] He merits the honourable commemoration which he receives whenever the fold of Douglas is mentioned. The human body, a nobler structure than any temple made with hands, is a kind of Westminster Abbey for the first centuries of anatomists. There Willis, Fallopius, Malpighi, Tulpius, Lower, Wharton, and Glisson all have their monuments, more suitable to their work and more to their own taste than any "storied urn or animated bust." Douglas well deserves his place in that temple of fame. With regard to diseases of the heart we feel that we know a great deal more than he did, much more even than John Hunter did. Vast have been the additions to knowledge in that subject since Hunter's century. Dr. Mead was the most famous physician of London in Hunter's childhood, and in his medical writings all he has to say about heart disease fills only two small pages. We have at our disposal works on heart disease the titles alone of which fill 92 large pages with double columns of the catalogue of the Surgeon-General's Library at Washington, that admirable aid to study which we owe to the organising skill and indefatigable industry of Dr. Billings. Notwithstanding this vast accumulation of knowledge in the hands of the medical profession of to-day, difficulties still exist in relation to heart disease and errors are committed which we should all wish to avoid. Much as is known many cases are hard to make out and difficult to treat.

I propose to discuss a few of the questions which from

[1] Philosophical Transactions, Nos. 345 to 350, vols. xxv., xxvii., xxix., xxxii. Myographiæ Comparatæ Specimen, 1707. Description of the Peritoneum, 1730.
[2] Lilium Sarniense, 1725. Arbor Yemensis fructum Cofe ferens, 1727.
[3] Bibliographiæ Anatomicæ Specimen, 1715.

time to time arise in the consideration of disease of the heart. A few rules with regard to the physical examination will save many mistakes. The first is, in writing notes of a case to make certain precisely what is heard or seen; to go on listening till certainty is arrived at with regard to the quality and distribution of every sound heard; and never to mix this observation with hypothesis as to the cause of what we observe. A note on a case of valvular disease should state the time, the quality, the place of maximum intensity and the distribution of the murmur. When these are precisely determined the conclusion may be added. Such expressions as "a mitral regurgitant murmur," or "an aortic obstructive murmur," should never be used in the original note on a case. The observations as to time and sound may be precise and perfect for each observer, but further circumstances may have been overlooked which may vitiate the conclusion he draws. A second independent observation may add more facts and so point to another conclusion. The mixture, at the beginning, of what is observed and what is inferred often prevents the correction of an error. It is wise when seeing a case of valvular disease for the second time not to look at the original note but to record an absolutely fresh observation and then to compare the two. A large experience will convince anyone that there are possibilities of error in relation to valvular disease which can only be avoided by great care in recording what we hear, by numerous observations, and by comparison of several observations. The habit of determining exactly what we hear should be cultivated and all doubtful or doubting expressions avoided so far as the evidence of the senses is concerned. Another practice which saves many mistakes is the careful observation of the pulse and comparison of its results with those of the auscultation. In examining a case of valvular disease it is not too much to feel the pulse with close attention throughout three complete and separate minutes, noting the number of the beat in the minute in which any inequality or other peculiarity is observed. This method, if pursued with regard to irregular action, affords an exact measure of the increase or diminution of the irregularity from day to day or from week to week.

Murmurs are, of course, sometimes very faint, barely audible. The inhalation of a capsule of nitrite of amyl will often be immediately followed by a marked increase in the sound of a murmur and is a much safer method of procedure than any violent muscular exertion.

One of the first points in the examination of a heart is to determine whether hypertrophy is present or not. The position of the apex beat and the character of the impulse are the most important guides. Too much care cannot be taken; the best observers have sometimes failed to distinguish between hypertrophy and pericardial effusion. I once witnessed a melancholy example of this difficulty which impressed me deeply. A physician of great experience after a careful examination decided that a man sitting up in bed with embarrassed breathing and irregular action of the heart had a large pericardial effusion. A surgeon was asked to puncture the pericardium with a trocar. He did so, no fluid came out, and the patient died immediately. I examined him post mortem. There had been no pericardial effusion, there was great hypertrophy, the trocar had penetrated the heart wall, and a fatal hæmorrhage into the pericardium was the result. Both the physician and the surgeon have long been dead. Both were men of the most careful habits of procedure. The surgical method was that of its time; the physician was a man of well-deserved reputation for skill in auscultation and percussion. His error demonstrated the occasional difficulty of being certain about the presence of hypertrophy of the heart.

Hypertrophy once determined must be explained. We must rigidly clear our minds from any idea that hypertrophy is a normal variation in the heart due to muscularity of the body. The idea is still prevalent that big men have a condition of heart resembling hypertrophy. Professor Haughton evidently held this view. In his ingenious writings on animal mechanism he suggests that Master Magrath, the celebrated greyhound, had a left ventricle of unusual size because of his great muscular development. I believe that there are good grounds for the opinion that this greyhound and others have had large and truly hypertrophied left ventricles because they were the subjects of chronic interstitial nephritis. Hypertrophy of the heart has always a morbid explanation. If it is an hypertrophy of the left side it means that valvular disease, chronic interstitial nephritis, or adherent pericardium is present. Aneurysm by itself is never a cause of hypertrophy.

When hypertrophy of the left ventricle is determined the next step is to decide which of these three causes has produced it. The largest heart, the *cor bovinum* of old writers, weighing from 24 to 36 ounces, is always due either to disease of the aortic valves or to chronic interstitial nephritis. The largest heart I have myself seen due to mitral regurgitation alone weighed 22 ounces. In few cases of hypertrophy due to mitral regurgitation does the weight of the heart reach 20 ounces; from 15 to 17 ounces is a common weight.

It would be useful if we could correlate each particular position of displaced apex with a definite degree of hypertrophy as indicated by increased weight. My own observations in the post-mortem room of cases examined during life do not entitle me to go further than the statement that when the apex beat is in the nipple line and sixth interspace the heart may be of double its natural weight—that is, it may in a man weigh 20 ounces. This observation is at least of use that it may impress upon us the considerable degree of any hypertrophy in which the apex beat is in the sixth space and nipple line.

The presence of dilatation as distinct from, or as associated with, hypertrophy may be inferred from symptoms but is rarely capable of accurate demonstration from physical signs alone. I know from my own observation that dilatation may be rapid, for I have seen a case of extreme dilatation of the right ventricle in a child who died after six weeks of whooping-cough at the beginning of which the heart was undoubtedly normal. In most cases of long-standing chlorosis, since the heart's action is feeble and anasarca of the ankles is common, I believe that some dilatation of the heart exists and I incline to the belief that the cardiac murmur in these cases is often, if not always, associated with a slight degree of mitral regurgitation due to the condition of the heart-wall and the musculi papillares of the valve.

To return to cases of undoubted valvular disease. The cardiac impulse is sometimes accompanied by a thrill and we try to determine whether this is due to mitral stenosis, to extreme rigidity of the aortic valves, to pericardial causes, or to an aortic aneurysm. The thrill produced by mitral stenosis is never felt except at the apex, but the thrill of rigid aortic valves may be felt at the apex as well as at the base and is sometimes to be felt at the apex and not at the base. The character of the pulse will in such cases protect the observer from error. The physical explanation may perhaps depend upon the affection of the aortic cusp nearest to the ascending flap of the mitral valve, but I have not proved this from post-mortem experience. With this may be mentioned the fact that the systolic murmur of aortic obstruction, and the diastolic murmur of aortic regurgitation, and the double murmur caused when both defects are present, are all occasionally distinct at the apex and more rarely are inaudible at the base and audible at the apex only. The murmur of mitral stenosis is never audible at the right base. The murmur of aortic stenosis probably attains the loudest sound of all murmurs since it is the only murmur which I have ever heard distinctly at a distance of six inches and without contact with the patient's chest. The late Dr. Andrew maintained that the systolic murmur of mitral regurgitation was always to be heard at the angle of the left scapula and that it might thus be distinguished from the murmur of anæmia, but Dr. A. E. Garrod has shown that the murmur of anæmia is sometimes audible at the angle of the scapula. My own observation is that any systolic murmur which is distinct at the apex may be heard at the angle of the left scapula, but that if you take all the systolic murmurs heard at the apex and at the angle of the scapula a large majority of them will prove to be cases of mitral regurgitation.

The diastolic or presystolic murmur of mitral stenosis is never heard at the back. The careful auscultation of the back is important especially in relation to the separation of a group of murmurs in the same heart. If a patient has mitral regurgitation and aortic stenosis the systolic murmurs produced at the mitral and aortic orifices may thus be distinguished in many cases but not in all. On the back the mitral murmur will be loudest at the angle of the left scapula, the aortic murmur will often be well marked in the right supra-spinous fossa. If this systolic murmur be traced down towards the angle of the left scapula it will be found to grow fainter and then when the angle of the scapula is reached to be again loud. The murmur of aortic stenosis is generally audible in the right supra-spinous fossa and the diastolic murmur of aortic regurgitation is sometimes, but much less frequently, audible there too. It is sometimes

impossible to be quite sure that both mitral stenosis and aortic regurgitation are present. A distinct thrill confined to the apex will in many cases prove that the presystolic or diastolic sound heard at the apex is due to mitral stenosis, while an accompanying diastolic murmur heard at the right base is never due to mitral stenosis and is proof of the presence of aortic regurgitation. The same method of distinction will apply if there be both affections, stenosis and regurgitation, at each valve. Some weight may be attached to the observation that the murmur seems to be produced close to the applied end of the stethoscope. This will sometimes make one quite sure that a given sound belongs to the aortic valves. In such complicated cases an apex thrill may be safely assumed to be due to mitral stenosis if there be a distinct diastolic murmur and no thrill at the right base. If numerous observations are made the cases which cannot be fully worked out are very few.

Apart from congenital conditions diseases of the valves of the right heart are of course rare. I have only seen post mortem one case of tricuspid stenosis in which stenosis of the mitral valve was not present. Tricuspid regurgitation is always accompanied by well-marked backward flow in the veins of the neck, and no fancied localisation of a systolic murmur will justify this diagnosis if this movement in the veins of the neck be not present. I have seen three cases of stenosis of the pulmonary valves without any congenital malformation or other valvular disease. The characteristic features of such cases are that the systolic murmur is loudest at the left base, and that while on listening some uncertainty may be felt as to whether the sound may come from the aortic or from the pulmonary orifice the fact that the pulse is normal and has none of the characters of disease of the aortic valves or of the inequality common in mitral disease is the decisive observation. If this be repeated several times with the same result the diagnosis of pulmonary stenosis, rare as the disease is, may be made with confidence.

It is sometimes very difficult where disease of the mitral valve has begun in early childhood to distinguish it from the commonest congenital malformation, pulmonary obstruction with a small opening at the upper part of the septum of the ventricles. A careful and repeated examination of the pulse is often the best method of solution. Children with mitral disease usually develop better, though their growth is often retarded, than those with the congenital malformation.

One of the most difficult points to determine in relation to the physical examination of the heart is whether or no there is an adherent pericardium. In my opinion this diagnosis can be made with absolute certainty in only one case, and that is where mitral stenosis without other valvular lesion is present. This form of valvular disease is never on its own account associated with hypertrophy of the left ventricle. If, therefore, with mitral stenosis the left ventricle is hypertrophied and if there are no signs of chronic interstitial nephritis then the hypertrophy is certain to be due to an adherent pericardium. This is a rare association of changes and in every other condition the diagnosis of adherent pericardium is beset with difficulties.

Of all forms of valvular disease in the young mitral regurgitation is the commonest and it is also the one in which the possibilities of prognosis are best. The degree of improvement is often extraordinary. The patients in all cases of valvular disease which has begun in childhood and has continued into manhood run great risk of dying from pericarditis in addition to that of heart failure with dropsy, but if abundant rest and great care as to avoidance of probable causes of acute rheumatism and of over physical exertion be taken I have known such a patient grow well enough to enter the army and to do much active service in several climates.

In general relation to valvular disease in the young I think that we ought to believe that every case of rheumatic fever is a case of endocarditis and that we ought to take a child's temperature four times daily if possible for some weeks after such an attack and treat the slightest rise of temperature as if it were a fresh attack. By such care much serious permanent valvular damage would be avoided.

In the degenerative forms of valvular disease extreme care is well repaid (care as to nutrition as well as with regard to over-exertion), and the long duration of life of such patients with aortic disease often demonstrates this.

When angina pectoris is present, even if on a particular examination a murmur be not discovered disease of the aortic valves is almost always present. Now and then a severe cardiac pain felt towards the apex occurs in mitral disease. The attack lasts longer than true angina pectoris. It may occur without any exertion. I once thought that it might be pericardial, but I am now satisfied that this is not so, and that it is probably a pain originating in the wall of the left ventricle.

Apart from attacks of angina pectoris mitral stenosis is of all forms of valvular disease the most distressing to the patient. The entire absence of such distress will sometimes make it clear that aortic regurgitation and not mitral stenosis was the cause of a thrill and diastolic murmur. In mitral stenosis engorgement of the liver takes place early and often causes much pain. Bleeding from the arm before a painful degree of hepatic engorgement has taken place often makes the action of the heart less embarrassed and greatly relieves the patient and after considerable engorgement of the liver has set in some relief may be obtained by leeches applied over the region of the liver.

The questions which I have discussed in this lecture are probably all familiar to everyone present, a fact which illustrates the vast increase of knowledge of heart disease since the time of John Hunter. He and his illustrious relative Dr. Matthew Baillie seem to perceive indistinctly and afar off the subject of valvular disease which we are now able to discuss in elaborate detail. They seem to have only a dim perception of what we see quite clearly, so true is the remark of Biot that nothing is so easy as the discovery of yesterday, nothing more difficult than the discovery of to-morrow.

THREE CASES OF GASTROTOMY FOR HÆMATEMESIS.[1]

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CASE 1.—This was the case of a woman, 42 years of age, who was admitted into the London Hospital under the care of my colleague, Dr. A. E. Sansom, on Oct. 27th, 1899, suffering from recurrent hæmatemesis. The first attack was six years before, and it was followed by other attacks at intervals of about six months, until 18 months before her admission into the hospital. Then there was a longer interval; but early in September, 1899, the hæmatemesis occurred again, and since that date there were two attacks, one on Oct. 23rd and another on Oct. 27th. The vomiting came on, as a rule, two hours after food, and it was followed by severe pain, which at one time used only to last for an hour or so, but latterly had been almost continuous. The epigastrium was tender on palpation, but not superficially. The patient complained when standing of a feeling as of a heavy weight in the stomach and of a dragging pain below the angle of the left scapula. Swallowing was followed by a burning sensation at the pit of the stomach, as if the stomach was raw. The patient was the mother of 11 children, six of whom were living. In spite of all the blood she had lost she was not markedly anæmic, and there was nothing worthy of note in her history or general condition except that during the previous 11 weeks she had lost 15 pounds in weight. In hospital the patient at first improved very considerably, the vomiting and the pain ceased, and she was much more comfortable, but as soon as the diet was increased the vomiting recommenced and the stools became black. As there was no evidence of permanent improvement Dr. Sansom very kindly transferred the case to my care for operation. After the ordinary preparation the abdomen was opened in the middle line above the umbilicus and the anterior surface of the stomach was examined. There were no adhesions nor was there any cicatrix. An opening was then made in the great omentum and the posterior surface of the stomach was explored with a similar result. The stomach was then drawn into the wound and was packed round with sponges. A vertical incision was made in the anterior surface about midway between the two ends and the edges of the stomach wound were held apart by means of four pairs of pressure forceps. Through

[1] A paper read before the Clinical Society of London on Oct. 12th 1900.

this opening, after the contents had been sponged out, the mucous membrane was examined systematically, that lining the anterior wall of the stomach being pressed into the opening from the front and that on the posterior wall being brought into view bit by bit by the fingers of the left hand, which were passed through the rent in the great omentum. The only part which could not be seen was the neighbourhood of the cardiac orifice, and this was brought into view without difficulty by means of a full-sized vaginal speculum passed into the opening. Two small superficial ulcers were discovered on the posterior wall, nearer the cardiac end than the pylorus. They were triangular in shape when seen through the speculum (this may have been due to tension upon their margins), with steeply cut edges, only involving the mucous membrane and bleeding freely when touched. Silk ligatures were passed in two directions underneath these ulcers by means of curved needles and tied so as to strangulate the base; and as nothing else could be found the wound in the stomach was closed by means of a double set of silk sutures, the sponges were withdrawn, and the abdominal opening was secured with silkworm gut. Recovery was uneventful except for the persistence of vomiting. This was very severe and very painful for the first 36 hours and continued once or twice a day for the first 10 days, when it ceased altogether. On one occasion, some days after the operation, a small quantity of blood was brought up, but it seems to have preceded the vomiting, and it was not certain that it came from the stomach. The patient was allowed to have peptonised milk and the yelk of an egg on the second day after the operation, but no solid food was given until the abdominal wound was completely sound. She left the hospital on Jan. 6th, 1900, when she was free from pain and sickness and had been on ordinary diet for some days.

CASE 2.—This was the case of a woman, 34 years of age, who was admitted into the London Hospital under the care of my colleague, Dr. F. J. Smith, on Feb. 9th, 1900. The patient had vomited blood for the first time on Feb. 5th; the quantity was said to be half a pint. This was repeated on the same day, once again on the 6th, twice on the 8th, and once on the 9th, the quantity on some of these occasions being undoubtedly very considerable. The motions were black. There was no history of dyspepsia or of vomiting after food. There had been a certain amount of pain in the abdomen during the last fortnight, but it was vague and not localised, and was not made worse by food. The abdomen was not tender. The patient had never vomited blood before, but about a year ago her stools had been very dark for some days. She was much blanched and the pulse was 132. The day after admission the patient vomited again, bringing up 10 ounces of almost pure blood; and as it was clear that further delay would be dangerous Dr. Smith very kindly transferred the case to me. An operation similar in all essentials to that already described was performed on the evening of Feb. 10th. One very small bleeding point was found on the posterior wall of the stomach near the pylorus. It could scarcely be called an ulcer, but as the edges were ecchymosed and blood could be seen oozing from it it was sutured in the way already described. The wounds in the stomach and in the abdominal wall were closed with as little delay as possible and three pints of saline fluid were transfused into the median basilic vein. The patient vomited twice in the course of the night, bringing up a certain amount of coffee-ground material but no fresh blood. After that there was no further trouble. Owing to the great previous loss of blood convalescence was slow, but the patient rallied well as soon as she was placed upon ordinary diet, and she left the hospital four weeks after the operation.

CASE 3.—This case had a more chequered history than the other two. The patient was a man, 42 years of age, who had been an inmate of another hospital five years before, suffering from pain after taking food, vomiting, and loss of flesh. He recovered from this, and continued well until seven months before admission, when the old symptoms returned with, in addition, hæmatemesis and melæna. There was considerable tenderness and pain in the epigastrium, but no lump could be felt. Laparotomy was performed on May 29th, 1900, with the view of ascertaining whether there was a malignant growth. Nothing was found and the abdomen was closed. On recovering from the anæsthetic the patient began to vomit blood; and as this continued through the night without there being anything to account for it, on the following day the abdomen was re-opened, the stomach was drawn into the wound, packed round with sponges, and opened in the same way as in the two former cases. The stomach was very large, the mucous membrane was closely folded upon itself, and for a long time the source of the bleeding could not be found; but at last, on introducing a vaginal speculum, a large irregular surface upwards of one and a half inches in length was found at the cardiac end. Blood was pouring from it freely. The surface was covered with granulations and was very uneven. The edges were well defined but not steep. The muscular coat did not appear to be exposed. An attempt was made to ligature the tissues of the base by means of silk sutures passed underneath them from the mucous surface, but the silk cut through at once and only made the bleeding worse. After two or three attempts, as the patient's condition was not such as to make it advisable to prolong the operation more than was absolutely necessary, I determined to ligature the whole thickness of the wall. Fortunately, there were no adhesions on the serous side. A hand was introduced into the peritoneal cavity, the ulcerated portion of the stomach wall was invaginated into the interior by pressure applied upon the serous surface, and a silk ligature was tied as tightly as possible around the base of the invaginated cone. This controlled the bleeding at once. Three Lembert sutures were inserted across the puckered spot on the serous surface to safeguard it when the strangulated portion came away, and the incisions in the stomach and in the abdominal wall were closed as rapidly as possible. The patient was a good deal collapsed but rallied well. A small quantity of altered blood was vomited the same night, and the first stools that were passed were dark chocolate in colour, but there was no sign of any fresh bleeding, and everything went on well for 15 days. Then the patient was sick after taking some chicken, and two days later he was sick again, bringing up a considerable quantity of blood. This was followed by severe collapse, so that strychnia had to be freely given hypodermically. Three days later he was sick again, but brought up no more blood; and after that he began to improve rapidly. There was no more vomiting or pain on taking food. A fortnight later the patient was placed upon a diet containing minced meat, and a few days afterwards he left the hospital, apparently perfectly well. Whether the hæmatemesis a fortnight after the operation was due to the separation of the strangulated portion of the stomach wall or to the presence of another ulcer which had been overlooked at the time of the operation it is impossible to say, but the rapid recovery and the freedom from pain make me incline to the former view. Still, it must be remembered that ulcers are multiple in no less than 13 per cent. of the cases examined post mortem.

It has been estimated that hæmatemesis only proves fatal in 4 per cent., or at most in 5 per cent., of the cases in which ulceration of the stomach is diagnosed, and it might, therefore, be thought that such an operation as the one which I have described would be very rarely required. But though hæmatemesis may not actually prove fatal of itself it not unfrequently places life in serious danger and still more often it creates such a feeling of apprehension as to destroy all pleasure in life. It is not unreasonable, therefore, to think that if this operation could be shown to be unattended by any great amount of risk there are many people who would prefer the chance of an immediate and perfect cure to months, and even years, of comparative starvation with the possibility of sudden death always before them and at best a doubtful hope that recovery will ever be perfect. I am aware that the mortality attendant on operation for acute hæmorrhage has been estimated by Mr. Mayo Robson in his recent lectures at 64 per cent., but these figures admit of an obvious explanation and they merely illustrate the fallacy of statistics. As a matter of fact, the stomach, owing to the thickness of its coats, stands suture better than any other portion of the digestive tract, and if only cases are operated upon at a sufficiently early period, and not when they are *in extremis* or when the wall of the stomach has become extensively thickened and adherent, there seems to be no valid reason why the mortality should be greater than that of interval operations in cases of inflammation of the appendix. I must not be understood to suggest operation in cases in which the amount of blood lost is not sufficient to be serious or in which there has been only a single attack of hæmatemesis; but when the bleeding returns more than once and is either so profuse as to place life in immediate peril or so continuous as to threaten a condition of dangerous anæmia, operation, with the view not only of stopping the bleeding once for all but of getting rid

of the ulcer and of doing away with the possible risk of perforation, seems to me to offer a far better prospect than persistence in a form of treatment which has been tried and so far has not succeeded.

There are two points which deserve a certain amount of consideration. The first is the difficulty of finding the spot from which the bleeding comes. The second is the difficulty of dealing with it when it is found. There are two cases on record in which gastrotomy has been performed for hæmatemesis and the source of the hæmorrhage has not been ascertained. In one of these an ulcer, described as being larger than a franc piece, was found later at the post-mortem examination. That it was overlooked is not a matter for surprise if it is taken into consideration how difficult it is, especially in an operation which may have to be performed against time, to inspect and to examine thoroughly the whole mucous membrane of the stomach through a narrow opening in its anterior wall and to unfold and open out every recess so as to make sure that no erosion can be overlooked. In the other case no ulcer at all was found. This case does not stand alone; there are a considerable number of cases on record in which hæmatemesis has occurred and has proved fatal, not only without any ulcer, but without any lesion that could be detected post mortem, and this perhaps constitutes the greatest difficulty of all.

A good many of these cases have occurred after abdominal operations. One case, following an abdominal exploration, happened in my own wards only a few days before my third case of hæmatemesis was operated upon. The patient was a man, only 23 years of age. The complaint was carcinoma of the pelvic peritoneum. The operation was merely an incision two inches in length in the left iliac fossa and did not take more than 10 minutes altogether. The anæsthetic, which was A.C.E., was taken perfectly. The next morning, however, hæmatemesis set in and continued with such severity that death ensued within 48 hours, and at the post-mortem examination no lesion of any kind connected with the stomach could be found. There was no secondary deposit or ulceration. It is quite true that in these cases the other symptoms of gastric ulcer are usually wanting, but so they may be in the more acute forms of ulceration, the very cases in which hæmatemesis is most likely to occur and in which gastrotomy would prove of greatest service. In reference to this point I do not feel at all sure that the ulcer would ever have been discovered in my second case if the examination had been made post mortem and not during life. In spite of the patient having been reduced by the loss of blood to such a condition as to render transfusion imperative the ulcer was so insignificant that it was only detected after a long search. It was a mere erosion and did not deserve to be called an ulcer, and I cannot help thinking how easy it would have been to have overlooked it altogether if the inspection had been made after death, when there was no blood escaping from it to act as a guide.

The question, I suppose, really turns upon what is meant by the phrase "ulcer of the stomach." Hæmorrhage may, of course, take place from the mucous membrane of the stomach, as it may from other mucous membranes, without ulceration, and it may conceivably be so severe as to prove fatal; but it is hardly possible to understand that it can take place to this extent without a superficial rupture or erosion of some kind—so slight, perhaps, as to be scarcely perceptible post mortem when the bleeding has ceased, but distinct enough to localise the source of the hæmorrhage if seen during life and so to bring it within the range of surgical treatment. Certainly, given another case similar to the one which I have mentioned above of apparently causeless hæmatemesis persisting in spite of all ordinary remedies and threatening to prove fatal, I shall not hesitate to try to find out whence the bleeding comes, even if this does involve opening the abdomen a second time and incising the wall of the stomach.

The other difficulty to which I alluded is the treatment of the bleeding point when it has been found. All sorts of methods have been suggested and a good many have been tried—excision of the ulcer, ligature of the artery on one or both sides of it, curetting the surface, the actual cautery, strangulation of the base with silk sutures, ligature of the whole thickness of the wall drawn up into a cone, gastro-enterostomy, pyloroplasty, and even pylorectomy. Clearly no single method is available or even possible for all cases. Excision is probably the ideal one, but in any given case it is impossible to form a decision until the ulcer is seen and all the conditions are known. The locality of the ulcer, its size and depth, the character of the edges, whether they are much indurated or not, and, above all, the presence of adhesions to neighbouring organs, all require to be taken into consideration, and it very rarely happens that anything but the most general information can be obtained about any of these points before the abdomen is opened. Even the character of the hæmorrhage gives no clue, for apparently it may be equally severe and dangerous, whether it is arterial, venous, or even capillary.

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THE PROPHYLAXIS OF MALARIA AND THE DESTRUCTION OF MOSQUITOES IN THE ISLAND OF ASINARA.

BY PROFESSOR C. FERMI
AND
DR. TONSINI.

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As our readers may be aware, the island of Asinara, which is situated to the north of Sardinia, has the form of a figure 8 and it is only inhabited by convicts and by the staff of the lazaretto and of the penal colony. Before beginning the prophylactic experiments against malaria we considered it essential to study the topography of the island minutely and to compile a map indicating the following points: (1) the localities which are affected by malaria of grave or of mild type; (2) the localities where water exists either perennially or temporarily, in a standing condition or running, potable or brackish; (3) marshes, cisterns, pools, wells, tubs, &c.; (4) the superficial area and depth of the various collections of water; (5) the temperature, flora (lemna), fauna (amphibians, aquatic insects, &c.), of such collections; and (6) the presence of larvæ of the culex and of the anopheles. We were careful to compile the chart in the æstivo-autumnal season of the year.

The following are the results of our investigations. In the whole island of Asinara we found 11 malarious localities, six of which, with severe types of fever, lie in the southern portion facing Sardinia—namely, at Sant' Andrea, Castellaccia, Fornelli, Punta Lunga, Stagno di Santa Maria, and P. Pagliaccia, and the remaining five, with mild forms of the disease, in the northerly part—namely, at Cala d'Oliva, La Reale, Secondo Periodo, Campo Perso, and Tumbarino. The total superficial water area in the malarial season varies between 600 and 700 square metres, only one-fifth of which belongs to the northern half of the island, while all the rest lies in the southern portion, which is much more malarious. With regard to these 600 or 700 square metres it is to be noted that about one-half consists of perennial collections of water, including about 400 square metres of marshes, of which there are nine—namely, one of 10, two of 13, two of 20, one of 30, one of 40, one of 100, and one of 200 square metres; about 50 square metres are formed by 36 wells, half of which depend on springs; there are besides one deep well, 13 tanks with a superficies of 20 square metres, and seven tubs with four or five square metres of surface. We found larvæ of mosquitoes in nine collections of water and none in the other nine. All the seven tubs and a drinking-tank contained a great number of larvæ; in the tubs especially were numerous larvæ of anopheles, and in two of these filled with soapsuds we found many eggs of the culex. These last, though not yet hatched, were still alive, for they speedily emerged from the egg when placed in ordinary water, otherwise the larvæ did not live for more than 24 hours. We found aquatic insects in 506 specimens of water, and amongst these the cibister senegalensis, various other coleoptera, and numerous notonectidæ, veritable foes of the mosquito.

After this study of the island we passed to the prophylactic experiments.

A. *Destruction of the mosquito in its larval stage.*—The destruction of the larvæ was accomplished by petrolising the water throughout the island twice a month, following the method described in a former article in the *Annali d'Igiene Sperimentali* (fasc. I., 1900), entitled "The Liberation of a City from Mosquitoes." The process was commenced in June and was continued until the end of November. The drinking-tanks and the tubs containing larvæ were completely

emptied every 10 or 15 days, good care being taken that the water was rapidly absorbed by the soil so as not to allow of the development of the pupa, which may take place even on moist ground.

B. *Destruction of the mosquito in its adult stage.*—This was done by means of a mixture of powder of pyrethrum, chrysanthemum, valerian, &c., and with the zanzolina of Celli and Casagrandi, and, in the dormitories of the convicts when we had nothing better, by chlorine gas evolved from chloride of lime by sulphuric acid.

C. *Protection of habitations against the mosquito.*—We instituted these experiments in the convicts' dormitories which are situated in the southern part of the island looking towards Sardinia. The two dormitories, which are of rectangular form and one storey high, are built side by side; each is provided with one door and from 10 to 12 windows placed at a height of one and a half metres from the ground, and each accommodates about 40 convicts. The means used for protection against the mosquitoes consisted of strong resistant muslin tacked over frames fitted on the windows. Every morning regularly on the convicts leaving, any mosquitoes which might have found their way into the dormitories were destroyed. When the insecticide employed was chlorine the windows were opened after an hour or two, so that on the return of the convicts the dormitories might be quite free from both gas and mosquitoes. By a daily inspection of the cells and by questioning the convicts and guards we assured ourselves that the experiments were going on satisfactorily.

The results obtained were as follows. 1. The anopheles was almost never found in any of the dormitories, and the culex pipiens was much diminished in comparison with former years. 2. No case of primary malaria originating in the island was observed, for of the nine cases which occurred two came from Castiadas, one from Isili, and six were relapses. In the preceding year there had been 99 cases, of which 40 had been contracted in the island.

The island of Asinara both by its position and by the small quantity of water which it contains, by the absence of streams, and by the ease with which its convict population can be subjected to experimental conditions, lends itself in a unique and peculiarly suitable way to these experiments for the prevention of malaria, experiments which we mean to continue in the present year with the full confidence of then being able to present the first example of an entire country being freed from malaria by the destruction of the malaria-producing mosquitoes infesting it, and by the protection of the inhabitants against their infecting bites.

OPERATION *v.* TRUSS IN THE INGUINAL HERNIA OF CHILDHOOD.[1]

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AMONG the rather numerous contributions that have been made to the literature of hernia during the year 1899 there have been two that have come under my notice dealing especially with the questions propounded by the occurrence of inguinal hernia in children. At the Portsmouth meeting of the British Medical Association the subject was dealt with by no less eminent and experienced an authority than Mr. John Langton. I hope I may be pardoned for my undoubted presumption in placing in juxtaposition to Mr. Langton's authoritative utterance a paper read before the Surgical Section of the Inter-colonial Medical Congress of Australasia and published in THE LANCET of Nov. 18th, 1899, p. 1353, by myself, and I must in extenuation state the reasons that have impelled me to this course. In the first place I must point out the direct, I may even say the extraordinary, antagonism between the views held by Mr. Langton and those to which my own experience and reasoning have led me as set forth in the above-mentioned paper. The principles underlying the treatment of inguinal hernia in childhood that Mr. Langton advances as the result of his mature experience, together with the pathological reasoning that he incidentally introduces, display no new features. On the contrary, they constitute simply a confirmation of principles and methods that are time-honoured, so that I feel almost guilty of sacrilege in venturing to bring them into serious question. The effect of Mr. Langton's weighty pronouncement will without doubt be to disarm any lurking suspicions there may have been as to the rectitude of our established courses in dealing with hernia in childhood; my desire, on the contrary, is to re-arouse such suspicion and to stimulate rebellion. Mr. Langton's views may be stated as follows:—1. Hernia in a child may almost always be cured by a truss if sufficient skill and care be exercised, and some details are given as to the relation between the length of time the truss should be worn and the age of the patient. 2. Operation is, therefore, very rarely called for in children, and as additional reasons telling against operative treatment it is stated that the anatomical structures in the case of children are ill-suited to manipulation and that the sac is often difficult to find. 3. As to the mode by which continuous retention of the hernia brings about a "cure," this is not very clearly set forth, but it seems to me that a sort of veiled countenance is accorded to the popular superstition that the truss in some mysterious way causes obliteration of the sac through pressure. Now the whole argument hangs upon the truth or falsity of the proposition that inguinal hernia is curable in the large majority or even in a reasonable percentage of cases by the use of a truss, as Mr. Langton, in common with almost all authorities, states to be the case. To this proposition I must, with all deference, oppose a direct negative, and I cannot make it too sweeping and too strong. I say simply that (excluding very young infants) the use of a truss never cured a hernia yet and never will. To be explicit, by "curing" I mean not merely causing the hernia to keep up for an indefinite period—the essential feature of the "cure" must be the abolition of the hernial sac. The term "cure" is a misnomer when applied to any method of treatment that causes the hernia to disappear but leaves the sac still existent and ready at any time during the patient's life to receive the hernia again. What, then, is the explanation of the extraordinary error that has permeated the theory of inguinal hernia? Simply this: the remarkable mechanism of the inguinal canal has not been rightly understood and its significance has not been fully grasped; above all, the great fact of inguinal hernia has not been recognised—viz., that there is only one fundamental cause of oblique inguinal hernia, and that cause is the presence of a congenital sac in the inguinal canal. This statement is equivalent to a denial of the existence of any such affection as acquired oblique inguinal hernia. The practical significance of this fact and how far-reaching its effect must be upon the whole attitude of surgical science in respect of inguinal hernia is, I venture to say, a thing not generally apprehended. I have already dealt with this subject in another paper with considerable fulness, and I would ask any readers who do me the honour of considering this paper worthy of perusal to refer back to that paper, which is to be found in THE LANCET of Nov. 18th, 1899, p. 1353. On the present occasion I do not propose to recapitulate all the arguments that have already been adduced, but I think I see sufficient reason for telling the story again, and this time I shall treat it in a somewhat different way.

In my former paper I dealt with the subject of the etiology and treatment of inguinal hernia in the young in the customary formal way, beginning with the anatomy and physiology of the inguinal canal, passing onwards by stages of pathological reasoning and clinical observation to certain conclusions as to the right treatment of inguinal hernia in children—conclusions which are diametrically opposed to those that have always been and still are regarded as unimpeachable. On the present occasion I shall proceed in the reverse order, commencing with the operative treatment, deducing from the results obtained important conclusions as to the etiology of inguinal hernia, and finally the conclusion that the presence of a congenital sac is the sole cause of inguinal hernia, and that operative removal of the sac is the only treatment that is surgically sound. The adoption of this order in the treatment of the subject has the further advantage that it coincides with the order in which the evidence presented itself to me, and it will probably prove a convenient and effective plan for me to sketch briefly the history of my own experience in the treatment of inguinal hernia in childhood.

[1] The arguments employed in this paper are not meant to apply to the case of very young infants.

It is now nearly five years since I first operated on a child by Bassini's method and I can remember my dissatisfaction at the end of the operation. I had incised the external oblique aponeurosis which was quite unnecessary; I had found the sac projecting through a relatively small opening, bounded by the curved fibres above and Poupart's ligament below, and I had been guilty of the crowning absurdity of stitching these curved fibres to Poupart's ligament. There is happily no parallel in surgery for this astonishing proceeding when carried out in the belief that it is to be regarded as an integral factor in the permanent prevention of hernia. In a certain class of cases—viz., old-standing hernia where the inguinal opening is widely stretched and the musculature extensively damaged—suturing of the walls of the canal after Bassini's method is possibly both rational and proper when performed with full understanding of the purely temporary object the sutures are intended to serve, but as a routine measure and regarded as a means of permanently fortifying the abdominal wall against a return of the hernia the mere writing about it puts me to the blush. Since that first case I have never used any sutures whatever to the walls of the canal in children. I now began to operate with rapidly increasing frequency and was very soon struck with the fact that the inguinal herniæ of boys are with the rarest exception all alike, in that they are formed by the descent of bowel or omentum into an unobliterated portion of the processus vaginalis; while there is, I believe, no exception to the rule that the sac is congenital. Thus I have now operated 80 times, and of these I have no doubt that 79 were funicular (either total or partial) and one was a non-funicular congenital sac. If I am asked how I know that all these sacs were funicular in origin I answer, in the first place, that as soon as a surgeon begins to operate as a matter of routine on herniæ in children, instead of using the truss he will very soon convince himself of the funicular origin of the sacs by means of a host of coinciding points of evidence. Thus a certain number bear the unmistakeable brand of funicular origin in a variety of markings, annular thickenings, &c., due to attempted obliteration at those points, or by some evidence of obvious relationship with the tunica vaginalis, and so on; while those that do not offer any such direct evidence will be found to be anatomically identical with those that do in their relationship to the cord. That all the sacs are of congenital origin and that none of them are acquired is furthermore proved by the results of operation. Now, if a surgeon operates on a case of inguinal hernia and he opens up the canal and removes the sac and fixes the stump somewhere and puts the cord in a position which he considers an improvement on that chosen by Nature, and he carefully stitches up the canal and keeps the patient in bed for six weeks and the hernia does not recur,—having done all these things he does not really know what the result is due to and he will therefore have learnt nothing as to the original cause of the hernia. His position will be that of the apothecary who puts into a "mixture" a drug for each ailment that he thinks his patient *may be* suffering from, so that when the patient recovers he is no nearer to a correct diagnosis, being unable to tell which, if any, of the drugs has effected the good result. If, on the other hand, the surgeon operates on a case of inguinal hernia, and he does nothing except ligature and remove the sac at the level of the internal ring, and he lets the patient get up in 10 days,—if then the hernia does not recur he knows exactly what he has done to cure the hernia and there can be no possible doubt as to the original cause of the affection. Simple removal of the sac having cured the hernia the conclusion that the sac must have been the sole cause of the hernia is irresistible, for had there been any factor other than the presence of a congenital sac concerned in the production of the disorder such factor would be obviously unaffected by the operation and recurrence would take place inevitably.

I have operated upon 80 cases of hernia in children and I have found that the whole number are caused by the presence of a congenital sac. I find, further, that of the 80 congenital sacs 79 were of funicular origin. It is, I submit, inevitable that from these facts we should deduce the following conclusions:—1. Inguinal hernia in young subjects is caused by the presence of a congenital sac and there is no other cause. 2. The sac is in the vast majority of cases an unobliterated portion of the processus vaginalis. 3. Acquired oblique inguinal hernia in the young has no existence in fact. 4. Seeing that oblique inguinal hernia cannot occur in the absence of a congenital sac there can be no recurrence after the sac has been efficiently removed. These conclusions have yet, however, to be passed through a mill of very exacting criticism, and on their behalf many objections, at first sight very formidable, have to be met. The first objection that will be advanced will be on the score of sheer *primâ facie* probability. Is it reasonable, it will be urged, to deny to the inguinal canal of all places the capability of becoming the seat of acquired hernia? Acquired hernia is common elsewhere, notably in the femoral canal, and also in the form of direct hernia through the external ring. It is liable to occur also with inconvenient promptitude in any portion of the abdominal wall that may have been incised. Is it likely that the inguinal canal, the largest natural opening in the abdominal wall, should be immune from the liability to acquired hernia? The answer to this argument will be found in an intelligent scrutiny of the mechanism of the inguinal canal. I must ask pardon for saying that a clear idea of this mechanism is by no means universally displayed by the multitude of surgeons who have written upon hernia, and even Lockwood, whose writings on this subject are surely of surpassing excellence, does not appear to me to make quite as much of it as I think could with advantage be made. I am not aware that the salient features have been described quite so clearly as they are set forth in my own paper to which allusion has been made, and as I have nothing to alter in that description I will ask permission to reproduce it.

> The inguinal canal has this curious peculiarity, that it is formed by a rigid tendinous half and an actively contracting muscular half, and this anatomical arrangement in itself serves to invest the inguinal canal with an interest of its own; it is, so far as I am able to recall, anatomically unique—it certainly holds a unique position among the various seats of hernia and must therefore be placed in a special category and be accorded a study and examination proper to itself alone. Now, when curved muscular fibres contract they straighten, and the effect of the straightening of these curved fibres is to cause them to descend towards a position parallel to the floor of the canal and so close the opening. In other words, the action of the curved fibres is sphincteric, and the inguinal canal is a half-sphincter and is closed, so far as the structures passing through it permit, by this sphincter action. I need not, of course, remind you that the region of the internal ring is covered in and further supported by a portion of the internal oblique as it springs from Poupart's ligament, that the conjoined tendon fortifies the inner portion of the canal, and that the whole region receives support from its covering of external oblique aponeurosis, but the enormously predominating factor in the prevention of hernia is the sphincter-like action of the arched fibres which limit the canal above as they pass to their insertion into the conjoined tendon. This consideration has a most important bearing on our views when we come to investigate the conditions that underlie the occurrence of inguinal hernia. The immediate cause of the production of hernia is in all cases forcible compression of the abdominal contents, as in straining, and in the absence of such straining there is no chance of the occurrence of hernia, for there is ample room in the quiescent abdomen for all the abdominal viscera and a *vis a tergo* is required before any viscus can be forced out. Furthermore, in the normal condition of the inguinal canal there is no real opening except such as is occupied and accurately filled by the spermatic cord; for the rest the canal is a potential opening only and does not become open until something is forced into it to make it so. Now, the compressing force which tends to the production of hernia we may for practical purposes regard as being invariably the contraction of the muscular system by which the abdominal contents are enclosed, but the contraction of the abdominal muscles involves also the contraction of the curved fibres which, we have seen, constitute what I have ventured to call the sphincter of the inguinal orifice. So that the effort that is made by the abdominal muscles to force a piece of bowel into the inguinal canal defeats itself, so to speak, as far as the canal is concerned, by closing the opening of the canal with a firmness that is in direct and exact proportion to the effort expended in trying to force it, or, to put it in a way that savours rather less of hostility, the force which is exerted on the abdominal contents is exerted simultaneously in exactly corresponding degree in protecting the orifice of the canal.

This, then, I consider the complete answer to the argument as to the improbability of the inguinal canal being immune from liability to become the seat of an acquired sac, based on the analogy of hernia occurring in other situations. There is no real analogy whatever. This remarkable automatic, self-regulating sphincter mechanism is the peculiar possession of the inguinal canal; it completely destroys any semblance of analogy with any other of the seats of hernia, and intelligent contemplation of it will go far towards converting our views as to the probability in favour of the inguinal canal being sometimes invaded by an acquired sac into something very like a dead certain conviction that in the face of such efficient protection it never can be so invaded.

The second objection that has to be met deals with my fourth proposition, which is to the effect that hernia cannot recur after the sac has been efficiently removed. To this statement will be opposed the seemingly unanswerable argument that hernia has recurred often enough after operations in which removal of the sac was a feature. I have

dealt with this question with some fulness in my previous paper and on this occasion must be content with appealing against any objector on the facts. I simply repeat that hernia does not recur after simple removal of the sac, but that such so-called "recurrences" are not true recurrences at all, but traumatic herniæ due to misguided methods of operating which have involved incision of the abdominal wall. Thus I have seen a precisely similar traumatic hernia appear after an unskilfully performed operation for shortening the round ligaments. In this case there was of course no question of calling it anything but a traumatic hernia; but had the primary operation been for hernia the consecutive hernia would without doubt have been wrongly called a "recurrence." I am able to recognise but one cause of recurrence after simple removal of the hernial sac, and that is incomplete removal so that the upper portion is left behind.

Finally, in passing from the discussion of the operative treatment of inguinal hernia in childhood I will only express the opinion that owing to various reasons that I have indicated the function and pathological aims of operation have never been clearly appreciated and its value has been consistently and unjustly under-estimated. I shall now turn to the treatment by truss and I shall endeavour to show that the preference with which it has always been favoured is due not merely to unjust under-estimation of the capabilities of operative treatment, but to an equally unjust over-estimation of the capabilities of the truss. It is a fact that in the case of a child carefully treated by a truss for some months or years the use of the truss may be discontinued and the rupture may not come down even for years. It is therefore asserted that the rupture is "cured." It is further argued that in view of this desirable and bloodless consummation resort to operation is not justified until the truss has been accorded a fair trial.

There are, however, some other facts of profound importance to which I would invite attention. I have endeavoured to show—(1) that oblique inguinal hernia in childhood is invariably associated with a congenital sac; (2) that children may possess the sac but may remain free from hernial descent throughout life or up to any period of life; and (3) that children possessing such a sac are predisposed to hernia throughout life. To these three propositions, which are unquestionably true, I will add the two following, which I believe to be equally true: (4) that all cases of oblique inguinal hernia occurring at any time during the course of life occur in subjects who are the possessors of a congenital sac; and (5) that subjects who have never possessed a congenital sac, or in whom the sac has been efficiently removed, can never become the subjects of oblique hernia. It would seem, then, that we may divide all men into two classes in respect of inguinal hernia—viz., the immune and the predisposed, according to the presence or absence of a congenital sac in the inguinal canal. It is essential to a clear understanding of the truss question to recognise that of the predisposed only a certain proportion become actually the subjects of hernia at any time during the course of life. On the other hand, given an individual whom we know to be predisposed by the fact of his carrying a congenital sac in the inguinal canal, it is impossible to guarantee his immunity from the occurrence of hernia from day to day. Now the difference between the cure of hernia by operative removal of the sac and the cure by truss is the very substantial one that in the first the patient is raised to the level of the immune while the second merely drafts him into the ranks of the predisposed. When the matter is thrashed out in this way the argument becomes a very one-sided one indeed, for it can hardly be considered as coming within the sphere of rational debate to discuss the choice between immunity from hernia on the one hand and predisposition towards hernia on the other. I accordingly hold the opinion very strongly that operative removal of the sac is the only legitimate and proper treatment of every case of hernia in a child and is the only treatment that is in accord with the best principles and methods that obtain in the surgery of the present day.

With regard to other objections urged against operation, the unsuitability of the anatomical structures in young subjects and the difficulty experienced sometimes in finding the sac (in other words, the inherent difficulty of the operation), these I would submit with all respect are not real objections. All operations are difficult to perform well, and this operation is far more difficult than most others; that being frankly admitted, however, it is an operation in the performance of which those who have opportunity and aptitude will soon become expert, and no others should attempt it.

In thus advocating the universal employment of operation to supersede the use of the truss it is imperative that I should safeguard my recommendation by pointing out with great clearness the one source of danger that threatens removal of the sac. The danger which I am about to describe is practically the sole danger; it is an exceedingly threatening danger, but when once clearly understood it is an easily avoided danger. It lurks most treacherously in the phrase which has a familiar ring to our ears, "Ligature and removal of the sac *as high up as possible*." I cannot be sufficiently emphatic in declaring that this is the royal road to disaster. Mr. B. G. A. Moynihan in his recent Arris and Gale Lectures has well pointed out the danger that may lie at the neck of the sac in the shape of a diverticulum from the bladder even in adults; but I must point out that in the case of children this element of danger is magnified a hundred-fold. In operating upon children without incising the external oblique aponeurosis, but by merely pulling the sac down through the external ring while separating it from the cord, it is found to be a matter of extreme frequency to pull down a thickened structure at the neck of the sac, which is certainly in most intimate relation with the bladder, and will often contain a diverticulum from that viscus. Now, I have little doubt that inclusion of this structure in the ligature is the cause *par excellence* of disaster in operation for hernia in children, and I am confident that were this element of danger eliminated from the operation mortality would be practically unknown. We have become so impressed with the "ligaturing as high up as possible" idea that it is difficult for us to realise that the proper place for the ligature may be when the sac has been well freed and pulled down nearly half an inch below the external ring; such, however, is commonly the case, and I can only repeat that where a suspicious thickening makes its appearance at the neck of the sac such thickening must be carefully excluded from the ligature which must be applied immediately below it. When this has been done and the sac cut away the stump will at once spring back along the inguinal canal and be situated well within the curved fibres that form the inguinal sphincter. It does not always happen that this thickened structure comes into view; where it is absent a portion of sub-peritoneal fat, somewhat resembling a piece of omentum, makes its appearance. In this case the ligature will be applied at the lower limb of the sub-peritoneal fat, which site will obviously correspond with that of the internal ring.

I desire now, in conclusion, to set forth what I conceive to be the true significance of the whole discussion, and I may say at once that my main object is not merely to suggest a more scientific and improved treatment of hernia in childhood. It is true that, as I have very clearly stated, I regard the "curing" of hernia in children by the use of a truss as bad surgery and removal of the sac as the only good surgery, but while I advocate routine operation in children the good effects of this surgical departure will be by no means confined to the individual patients operated upon. The real gain to surgery will, I sincerely believe, prove to be the light thrown upon the whole subject of inguinal hernia by the adoption of routine removal of the sac in children. How badly this light is needed is proved by the amazing spectacle that is presented to us by the devices that have been proposed and carried out by some among the greatest of our surgical philosophers for the cure of inguinal hernia, and for illustration I do not hesitate to mention with the deepest respect the names of Macewen and Halsted. The very different methods advocated and the widely different principles enunciated by these two great authorities cannot both be right, and yet both methods are attended by success. It therefore follows that there must be some factor common to both operations which is not recognised as the real agent in effecting the good result; and this factor must be independent of the characteristic features of either operation—viz., the peculiar management of the sac in the one case and the transplantation of the cord in the other.

I need scarcely say that I have no thought of influencing, by any arguments of my own, the mind of the surgical profession so powerfully as to bring about a profound alteration in the views held in respect of inguinal hernia, but I can point to the particular form of argument that I believe will do so. This argument consists in the routine adoption of the method of treating hernia in childhood by

simple removal of the sac; the resulting effects upon our knowledge of the essential nature of inguinal hernia may, I venture to predict, be indicated as follows. 1. It will be found that all inguinal hernia in childhood is due to the presence of a congenital sac and will be cured by removal of the sac. This is equivalent to a statement that there is no such thing as acquired oblique inguinal hernia in the child. 2. Having become convinced of the truth of the above proposition we shall then ask, At what period of life and under what circumstances does inguinal hernia become acquired? Is there any evidence that it does occur at any time? Or is it possible that oblique inguinal hernia occurring at any age may be similar in nature to the affection in the child? In other words, does oblique inguinal hernia ever occur independently of a pre-formed sac? I am able to find no evidence of any kind in favour of the belief that oblique inguinal hernia ever occurs at any age independently of the presence of a congenital sac. It appears to me to be a pure assumption, based on unsound and insufficient reasoning, that because hernia may be acquired in other situations it may also be acquired through the internal ring. It is an exceedingly difficult matter to prove to demonstration one way or the other; at present, however, all the evidence seems to me to be in favour of the belief that there is no such thing as acquired oblique inguinal hernia. Further evidence on the subject may prove this view to be incorrect, but such evidence has, I submit, yet to be adduced. Should it turn out that what I believe to be the truth in this matter is in reality such, then it is impossible to over-estimate the importance of its bearing upon the surgery of inguinal hernia.

Let us assume for the sake of argument the truth of this view and let us then make a survey of the numerous operations that have been at various times devised for the cure of hernia. We shall find that the difficulties and obscurity that have always beset the subject vanish away, and it will become increasingly evident that the great flaw in all our reasoning, the error which has pervaded and vitiated all our views on the subject of inguinal hernia and has been answerable for such a multitude of conflicting remedies, is the non-recognition of the fact that the sole cause of inguinal hernia is the presence of a congenital sac in the inguinal canal. This point can be made out only in one way—by the abolition of the truss as a means of "curing" inguinal hernia in children; and it therefore becomes apparent that the answer to the question implied in the title of this paper is likely to carry with it results hitherto unforeseen, not only in respect of the surgery of hernia in childhood, but affecting also our knowledge of the incidence and right treatment of inguinal hernia occurring in every period of life.

Melbourne.

THE TREATMENT OF SEVERE CASES OF DIPHTHERIA WITH SALINE INFUSIONS.

BY E. E. LASLETT, M.B. VICT., B.SC. LOND.,

ASSISTANT MEDICAL OFFICER, PARK HOSPITAL, HITHER GREEN, S.E.; LATE SENIOR DEMONSTRATOR OF PHYSIOLOGY AT UNIVERSITY COLLEGE, LIVERPOOL.

SALINE infusion has now become a well-recognised therapeutic measure in many forms of acute septic disease. The following is a preliminary account of the results of its use in cases of severe diphtheria. It is generally considered now that under the influence of antitoxin treatment numerous cases of diphtheria recover from the acute stage that would have been fatal in all probability in the first few days of illness in the period before the introduction of antitoxin. Unfortunately, however, these cases are frequently disappointing in later stages. At a variable time after all membrane has disappeared, sometimes as early as the seventh day of illness, signs of serious heart failure appear, accompanied as a rule by persistent vomiting. So frequently does this happen that after some experience of diphtheria work, one can foretell with considerable accuracy which cases will develop this heart failure, a most serious sequela which in the majority of instances proves fatal.

The pathology of this condition has been well studied, and extensive fatty degeneration of the heart muscle has been found in nearly all cases. Villy[1] found it markedly present in 14 out of 15 cases in which death resulted from cardiac failure, and an important feature is the early period of the disease at which the fatty change develops. In one case Villy found it as early as the fourth day of illness. The fatty degeneration of the heart muscle is probably independent of nerve injury, but whether this is so or not it is certainly ultimately the result of the action of diphtheria toxin.

The use of saline infusion in these cases was undertaken at the suggestion of Dr. R. A. Birdwood, the medical superintendent of the Park Hospital. I have employed it in two conditions:—

1. *In the late stage.*—Its use is particularly indicated when, during the persistent vomiting, nutrient enemata are also rejected. Inasmuch as the fluids of the body are thus constantly diminished, the blood must become more viscid, and the work of the heart thereby much impeded. The absorption of a considerable quantity of saline fluid will therefore tend to diminish this viscidity and will consequently relieve the heart. Some six cases were treated in this way, but they were all ultimately fatal, probably because the damage already done to the heart was too severe to be recovered from. However, the treatment seemed to prolong life, and certainly made it more tolerable by the relief of the thirst and restlessness which are essential accompaniments of this condition.

2. *In the acute stage.*—At an early stage of the disease the introduction of additional fluid into the blood system will, it may be supposed, dilute the toxin, or help its excretion by producing diuresis. I am not aware of any experiments to prove the excretion of diphtheria toxin by the kidneys in man, but in the case of the lower animals its excretion in the urine has recently been demonstrated by Cobbett.[2]

Fifteen cases in all were treated in this way. They were chosen on account of their severity, the main indications being the presence of much spreading membrane, nasal discharge, and great fœtor of the breath. The infusion was carried out in the first instance as soon as possible after the admission of the patient and was continued during the first, second, and occasionally the third day. I have always used simply a solution of common salt of the strength of two teaspoonfuls to the pint. The injections were made under the loose skin below and outside the right breast. The pressure used was that of about from one and a half to three feet of water, which is quite sufficient and ensures the gentle and uniform distension of the subcutaneous tissue and thus produces very little pain. The salt solution was boiled, then covered over in a pint measure, and allowed to cool till it was just as hot as the hand could bear. It is impossible, however, to judge of the temperature of the saline solution as it passes into the skin on account of the rapid cooling that takes place in the indiarubber syphon tube. By this means from 10 to 15 ounces may easily be injected in half an hour, and it is surprising how little discomfort it produces. During the process the children are readily soothed and quite commonly fall asleep towards the end of the injection.

The condition of repose brought about by the infusion is an undoubted fact and is probably due partly to the sense of warmth produced and partly to the filling of the blood-vessels as absorption of the solution occurs. Certainly the pulse tension as determined by the finger rises rapidly. Craig[3] in a large number of observations on insane patients found that in melancholia the pulse tension is raised, while in mania it is below normal. In a subsequent paper[4] he refers to the beneficial effect of rectal injections of salt solution in conditions of maniacal excitement. One of the worst features in a severe case of diphtheria is the condition of extreme restlessness during the first few days of illness which prevents anything but mere snatches of sleep being obtained. The relief of this condition by the infusion is very real and contributes considerably to the beneficial effect of the treatment. Owing to the youth of the patients and the severity of the illness the urine is commonly passed in the bed and consequently it has only rarely been possible to determine the influence of the treatment in the direction of diuresis. In one or two cases diuresis was certainly well marked and it continued for a day or two after the treatment had ceased.

From the accompanying table it will be seen that of the

[1] Medical Chronicle, September, 1899.
[2] THE LANCET, July 7th, 1900, p. 22
[3] THE LANCET, June 25th, 1898, p. 1742.
[4] British Medical Association, 1900.

TABLE OF 15 CASES OF DIPHTHERIA TREATED WITH SALINE INFUSIONS.

Case.	Age.	Antitoxin.	Saline infusion.		Remarks on case.	Complications and sequelæ.	Number of days in hospital.	Result.
			Injections.	Amount.				
1	5½ years.	12,000 units.	4	20 ounces.	Great fœtor with spreading membrane.	Suppression of the urine.	3	Death.
2	4 ,,	9,000 ,,	3	15 ,,	Profuse epistaxis.	Scarlet fever 18 days after admission.	98	Recovery
3	4½ ,,	15,000 ,,	2	25 ,,	Very severe attack with "bull neck."	Macular rash on the fifth day; paresis of the lower limbs.	73	Recovery.
4	1½ ,,	12,000 ,,	3	26 ,,	Extreme restlessness; sleep after infusion.	Abscess on the seventh day; rash on the third day; cardiac vomiting and failure.	17	Death.
5	5 ,,	15,000 ,,	4	36 ,,	Much discoloured membrane; great swelling.	—	Transferred to the Convalescent Hospital.	Recovery.
6	2 ,,	9,000 ,,	3	20 ,,	Hæmorrhagic.	—	2	Death.
	5 ,,	18,000 ,,	2	20 ,,	—	—	3	Death.
8	2½ ,,	15,000 ,,	1	9 ,,	—	—	1	Death.
9	4 ,,	12,000 ,,	2	22 ,,	Profuse epistaxis continuing till death.	—	7	Death.
10	9 ,,	15,000 ,,	2	24 ,,	Great restlessness relieved by infusion.	Broncho-pneumonia on the sixth day.	8	Death.
11	7 months.	9,000 ,,	2	6 ,,	Faucial and nasal.	—	52	Recovery.
12	3 years.	15,000 ,,	3	20 ,,	Much membrane; severe continuous epistaxis.	Cardiac vomiting from the fifth to the eleventh day; diaphragmatic and laryngeal paralysis on the thirtieth day. Paresis of the lower limbs.	63	Recovery.
13	4 ,,	9,000 ,,	3	33 ,,	Much membrane spreading; great fœtor.	Ocular paralysis on the thirty-fourth day.	Transferred to the Convalescent Hospital.	Recovery.
14	2 ,,	9,000 ,,	4	24 ,,	Spreading discoloured membrane.	Rash on the second day; general paresis.	62	Recovery.
15*	6 ,,	15,000 ,,	2	23 ,,	Much membrane; fœtor; delirium; hæmorrhagic.	Abscess on the eighth day. Cardiac vomiting from the thirty-second to the forty-first day. Diaphragmatic paralysis on the thirty-fifth day; general paresis.	98	Recovery.

* This patient was under the care of my colleague, Dr. Densham, after the first week. During the vomiting stage she was given saline infusions on several occasions with marked benefit.

15 patients seven died, while eight recovered after a convalescence more or less eventful. Of the seven fatal cases six patients died during the acute stage. In three cases the patients developed the usual symptoms of heart failure; one patient died on the seventeenth day, the other two recovering after a prolonged period, during which paralysis of the diaphragm occurred.

Of course no definite conclusion may be drawn from the results of only 15 cases, although these were chosen from a large number of admissions as being of the severest type and therefore most likely to develop cardiac paralysis. Nevertheless this treatment appears so far to have some influence in diminishing both the frequency of onset of symptoms of heart failure and their severity when they do occur. Further experience is, however, necessary before one may dogmatise.

As in the case of antitoxin treatment the results will probably be the better the earlier the patient is admitted to hospital, and on this account I have endeavoured in all cases to complete the infusion by the second day after admission.

Two of the patients developed an abscess at the site of injection. This, though a high rate, must be considered, I think, as more or less accidental, and in dealing with a large number of cases the occurrence of an abscess after saline infusion would be probably not more frequent than is the case after injection of antitoxin alone. In neither instance did any ill effect follow and after evacuation of the pus healing rapidly took place.

My best thanks are due to Dr. Birdwood for permission to publish this paper and to my colleague, Dr. W. A. Densham, for permission to make use of Case 15.

Hither Green, S.E.

THE VALUE OF ANTI-STREPTOCOCCIC SERUM.

BY GERALD S. WALTON, M.B., C.M. EDIN.

A RECENT number of THE LANCET contains some depreciatory remarks about anti-streptococcic serum by Dr. Ranken Lyle.[1] Scepticism is a virtue, but it may be carried to an extreme, and what I fear is that some medical men after reading Dr. Lyle's paper may put its scepticism into practice and never use the serum again. I venture to think that such ultra-rationalism will every now and then meet with its own reward in the shape of a lost case. I have not the slightest hesitation in saying that in the two cases which I am about to describe the result was no mere coincidence, such as Dr. Lyle wishes to suggest, but that it was a genuine remedial action on the part of the serum only.

CASE 1.—A married woman, aged 20 years, a primipara, who had been anæmic and ill-looking even before the birth of her child, was confined easily on August 10th, 1900. There were shock and depression of spirits and slight rise in the pulse and the temperature almost from the start. There was sepsis from the third day, when a small fœtid clot was passed. The milk was suppressed and the infant had to be weaned. The lochia were much too small in amount and were rather putrid, and the womb was flabby and tender. By the fifth day the temperature was 101·5° F., the pulse was 130, and the patient was weak and yellowish in colour.

1 "Puerperal Sepsis," THE LANCET, Sept. 29th, 1900, p. 925.

The case was notified. 10 cubic centimetres of anti-streptococcic serum were injected. The injection was followed by a slight reaction, and on the next morning there was a distinct though slight improvement in the pulse, in the temperature, and in the general condition, which was dissipated, however, by the evening of the same day. A further dose of 10 cubic centimetres of the serum was injected, and again there was a slight improvement, which occurred after drowsiness, diaphoresis, and vomiting. This time the improvement was maintained for two or three days and the temperature dropped to 100°. A relapse then set in, and by the sixteenth day the temperature gradually went up to 103°. On the next morning 10 cubic centimetres of the serum were injected into the right arm, the temperature then being 101·5°. In the evening a pleuritic catch was complained of and was detected in the right lung and a little morphia was administered. The patient's temperature was then 102° and it was nearly the same on the next morning when I gave her 12 grains of sodium salicylate. This caused profuse sweating and a rich crop of sudamina and brought down the temperature to 99·4°. The patient was then put on a mixture containing sodium salicylate and she was convalescent by Sept. 4th.

CASE 2.—The patient was a woman, aged 30 years, who was, curiously enough, of the same name as the patient in Case 1 but was not in any way related to her. She had been subject to "quinsy" and she imagined that she had another attack after exposure to cold and the history of the case and the appearance of the left tonsil seemed to indicate that she was right. She was very weak. On the second day of my attendance her temperature was 100° F. and her pulse was 108. There was a nasty dark slough which involved the tonsil, the uvula, and the neighbouring parts. The patient's general condition seemed precarious in the extreme and a swab and a bit of the slough were sent to the Jenner Institute of Preventive Medicine for examination; but without waiting for the report, as I judged the case to be septic if not diphtheritic, I injected 10 cubic centimetres of anti-streptococcic serum. Reaction occurred, and in the afternoon the pulse and general condition were decidedly improved although the temperature was now 101°. On the next morning the patient seemed to be quite a different woman. Her temperature was normal, her pulse was 88 and of good strength, and her general condition was vastly improved. A report from the Jenner Institute came that day that diphtheritic bacilli had been found in the materials submitted for examination and she was consequently removed to the isolation hospital, where she continued to make satisfactory progress.

The serum used on all these occasions was supplied by Messrs. Burroughs and Wellcome. It is true that the patient in Case 1 eventually got well on sodium salicylate and that there was apparently a connexion between the third injection of anti-streptococcic serum and the smart attack of dry pleurisy which occurred, yet I was quite satisfied with the effect of the serum on the fifth and sixth days and I blame myself for not using it again till the sixteenth day. With regard to Case 2 Dr. D. G. Halsted, who was kind enough to see the woman with me, will bear me out that the effect of the injection was very remarkable. Even allowing that she was left in a weak state and that after leaving my hands she was further treated with anti-diphtheritic serum for some days, I maintain that I gave her a magnificent start, without which the case might have terminated very differently. Diphtheria in most cases is probably a mixed infection, and I would suggest that in all cases a preliminary dose of anti-streptococcic serum should be given. I cannot think it judicious that such a powerful remedy—call it "tonic" if you will—should be lightly and flippantly cast aside.

Sutton, Surrey.

HOSPITAL SATURDAY.—Hospital Saturday was observed in London on Saturday for the twenty-seventh successive year, and special collections were made in many thousands of business houses and workshops on behalf of the hospitals and dispensaries. The method of street collection has been abandoned, but the regular "penny-a-week" collection in the industrial establishments will be continued until the end of December, by which time it is hoped that the total for the year will not fall short of that raised in 1899—viz., £20,013. The result of Saturday's collection will be announced at the annual general meeting of the association to be held at the Mansion House on Oct. 27th.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF ANTHRAX; EXCISION OF PUSTULE; RECOVERY.

BY EDWARD C. BOUSFIELD, L.R.C.P. LOND., M.R.C.S. ENG.,
BACTERIOLOGIST FOR THE BOROUGH OF CAMBERWELL.

I AM reminded by the case narrated by Dr. E. F. M. Neave in THE LANCET of Oct. 6th, p. 1012, of a somewhat similar one which occurred in my own practice.

I was consulted at 2 P.M. on Oct. 22nd, 1898, by a man whose business involved the handling of imported hides as received. He had upon his neck over the sterno-mastoid a swelling of a very suspicious appearance, dusky red, with a central depression surrounded by vesicles of small size, which he had noticed that morning for the first time. His temperature was above 102° F. and the appearances were altogether so unsatisfactory that I asked my friend Dr. C. Wenyon, who had seen several cases of anthrax in China, to see the case with me, and he was inclined to agree with my diagnosis. He did so fully on the following day, when the swelling had to some extent increased in size and the temperature had risen to 104°. The patient being fully aware of his danger and quite willing to submit to operation, I excised the pustule, cutting three-quarters of an inch wide of it all round, and removing everything down to the fascia. The whole wound was then thoroughly cauterised with pure phenol and left undisturbed till the slough separated. The temperature fell on the same evening to 99·4°, and was normal on the following day, after which recovery was uninterrupted. The serum contained a very few bacilli, quite like those of anthrax, but I have not even yet had time to examine the pustule. Apart, however, from its perfectly typical appearance, a drop of nearly five degrees in the temperature within six hours of its removal, and the fact that the patient remembered having had a pimple on his neck, which he had scratched with his nail whilst engaged in examining hides, seemed to render any doubt of the diagnosis untenable. It seems a pity that the same treatment was not tried in the case which suggested this note.

No remedy is known to have any certain effect in this disease, whilst it seems probable that the toxic symptoms, in the human subject at least, arise from absorption from a limited area, and the removal of the focus is *primâ facie* the treatment most likely to be effectual. In any similar case I should certainly do the same again, except that I should do it at once.

Old Kent-road, S.E.

A RARE CASE OF FRACTURE OF THE OS CALCIS BY MUSCULAR FORCE.

BY ROBERT THOMSON, M.D., M.CH. R.U.I.,
HONORARY SURGEON TO THE MARGATE COTTAGE HOSPITAL.

A WOMAN, aged 57 years, stood on a Windsor chair to reach some china from a cupboard. She had the china in her hand and was turning round to place it on a table close by when she got too near the edge of the chair, which capsized, and she was thrown to the ground. As her weight was overbalancing the chair her left foot, while remaining in contact with the seat, was forcibly and suddenly flexed. She was wearing a pair of ordinary laced shoes at the time. On examination some hours after the accident there were pain up the back of the left leg and inability to extend the ankle. The tendo Achillis was felt ending in a hard moveable mass some five inches from the sole of the foot and between this mass and the os calcis was a considerable depression. It was evident that the os calcis had fractured, the tendon remaining intact. The fragments could not be approximated. I cut down on the seat of the fracture and found that a piece of os calcis of about the size of half a walnut and corresponding to the area of insertion of the tendon had been wrenched off and drawn upwards. This could now, under anæsthesia, be easily brought down and apposed to the

corresponding fracture surface on the os calcis. The fragments were retained in position by an encircling silver wire passed through the body of the os calcis and through the tendon at its attachment to the fragment. The wound healed by first intention and firm union of bone resulted. Free action of the joint was subsequently much delayed by an attack of melancholia, during which the patient would not leave her bed or permit of movements being made. At the end of two and a half months, however, she could walk well.

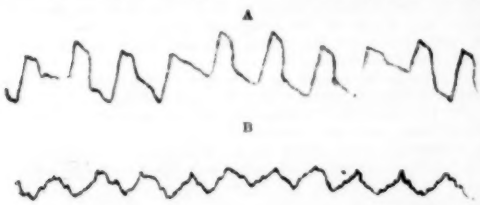
This patient presented no evidence of bone degeneration and had never sustained a fracture of any kind before. She was well nourished and had enjoyed good physical health. She is said to have had previous mental attacks. No obvious reason presents itself for the bone having fractured, instead of the usual rupture of the tendo Achillis under like circumstances, except it be the noticeable tendency of bone to fracture under slight provocation observed in some patients suffering from mental disease.

Margate.

A POINT IN THE DIAGNOSIS OF ANEURYSM OF THE AORTA.

BY WALTER BROADBENT, M.D. CANTAB., M.R.C.P. LOND.

THERE are cases of aneurysm of the transverse part of the arch of the aorta which present as a slight pulsation in the second left intercostal space near the sternum before they have involved the recurrent laryngeal nerve, or the aorta may be pushed forward by an aneurysm of its posterior wall and give pulsation in this space. There are also cases where old phthisis of the left lung has caused exposure of the heart sufficient to give pulsation in the second left space. In both conditions the second sound is louder than normal over the pulsating area and it is difficult to make out any diastolic shock in the early pulsation of an aneurysm, though as a rule it is easy to distinguish the cardiac pulsation, since the whole surface of the heart is usually exposed and pulsation is continuous down to the apex beat. If a tracing of the pulsation be taken by a Marey's sphygmograph any doubt is at once cleared up, the arterial character of the tracing marking an aneurysm. The accompanying tracing (A)



A, Pulsation in the second left space. Small aneurysm of the transverse part of the arch. B, Pulsation in the second left space in a case of old phthisis.

was taken from a man who had a cough and diminished air entry into the left upper lobe, and it was thought that he might be the subject of early phthisis. Subsequent paralysis of the left vocal cord and increase in the pulsation confirmed the diagnosis of aneurysm. A tracing (B) of the cardiac pulsation in the second left space from a case of old phthisis is added for comparison.

Brighton.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors of the society was held on Oct. 10th, the President, Mr. Christopher Heath, being in the chair. One new member was elected and the deaths of two members were reported. There were no fresh applications for grants. The death of a widow was announced. Applications for grants were read from the 47 widows, 12 orphans, and six recipients from the Copeland Fund now on the funds of the society, and it was resolved that £1187 10s. be given at the next court. It was also resolved that Christmas presents be given this year amounting to £531—£10 to each widow, £3 to each orphan, and £5 to the five receiving extra grants from the Copeland Fund. The expenses of the quarter were £61 5s.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST.

A CASE OF HYDATID CYSTS OF THE LIVER RECURRING AFTER AN INTERVAL OF TEN YEARS IN THE PLEURAL AND PERITONEAL CAVITIES; DRAINAGE; RECOVERY.

(Under the care of Dr. EUSTACE SMITH and Mr. J. F. C. H. MACREADY.)

ALTHOUGH hydatid disease is not so frequently met with in this country as in some other portions of the world, such as Australia, yet it is sufficiently common to cause us frequently great difficulties both in diagnosis and treatment. The following case illustrates the value of the bile test when applied to the hydatid fluid as an indication that the cavity opened communicates with the liver. Even when it is difficult or impossible to obtain the bile reaction crystals of bilirubin may be found in the hydatid fluid by the aid of the microscope; this fact was first pointed out by Bristowe.[1] For the notes of the case we are indebted to Dr. J. G. Emanuel, pathologist to the General Hospital, Birmingham, and late resident medical officer City of London Hospital for Diseases of the Chest, and for a careful record of the clinical history to Dr. O. K. Williamson.

A married man, aged 24 years, was on May 11th, 1899, admitted into the City of London Hospital for Diseases of the Chest, under the care of Dr. Eustace Smith. The patient was suffering from shortness of breath which had been coming on and gradually getting worse and worse for about five weeks. Five weeks before his admission while at work the patient was seized with a sharp pain in the middle of the abdomen. As a means of getting relief he took some tea but vomited immediately and he then went home and from that day onwards had done no work, having felt too weak and his breath having been too short. For two weeks before admission he had had pains in the right side of his back. The past history of the patient showed that on the whole he had enjoyed good health but that on two occasions (July, 1888, and October, 1889) he had been an in-patient at St. Bartholomew's Hospital and that on each occasion he had had a hydatid cyst of the liver incised and drained. The patient had two abdominal scars (one in the right vertical nipple line and the other in the epigastrium a little to the right of the middle line) bearing testimony to the statement, and subsequent inquiry at St. Bartholomew's Hospital corroborated these facts. The first operation was performed 11 years ago (in July, 1888) and the second operation a year later (in October, 1889). At each operation a hydatid cyst with daughter cysts was found, incised, and drained. After the second operation the patient left the hospital (in December, 1889) and had enjoyed good health since till five weeks before his admission to the hospital.

On admission the patient was found to be a pale, thin, red-haired man, sitting up in bed with a good deal of dyspnœa and the alæ nasi working. The pulse was 120, the respirations were 36, and the temperature was 102° F. The physical signs pointed to a large amount of fluid in the right chest; the heart was displaced outwards to the left (the maximum cardiac impulse being in the fifth space and in the anterior axillary line) and the liver was displaced downwards (the lower edge being three inches below the costal margin in the right vertical nipple line). The left lung was clear except for a few scattered sibilant rhonchi. The heart sounds were normal. The urine was free from albumin. In the abdomen there was bulging of the right hypochondrium corresponding to the displaced liver. The tongue was

[1] Transactions of the Pathological Society of London, vol. iv.

clean, the appetite was poor, and the bowels were regular. The patient had been sleeping badly previously to his admission.

On the evening of the patient's admission (May 11th) an exploring needle was put into the right chest in the eighth space in the scapular line and a syringeful of quite clear greenish yellow fluid loaded with albumin was obtained. On the following day, the dyspnœa having shown no signs of improvement, the right chest was tapped at the site of the exploratory puncture, a simple trocar and cannula being used. Failing, however, to draw off any fluid aspiration was resorted to and eventually there were drawn off 38 ounces of greenish yellow slightly turbid fluid, of a specific gravity of 1019, of alkaline reaction, and containing a large quantity of albumin. This fluid deposited on standing a sediment which on microscopic examination was found to consist of pus cells, granular débris, and cholesterin. No hooklets were found. The aspiration gave marked relief to the patient and he passed a good night. On the next morning (the 13th), however, he had a rigor, the temperature rising to 104·2°. On the 14th the evening temperature was 103·8° and as the patient showed evidence of sepsis it was decided to resect at the site of the aspiration puncture and to drain the pleural cavity. On the morning of the 15th the patient suddenly coughed up in the course of a few minutes about eight ounces of offensively smelling purulent greenish yellow fluid. Up to this date he had only had a slight cough accompanied by a little mucoid expectoration which had not attracted much attention, but from this time onwards the cough became troublesome and the expectoration purulent, considerable in amount, and offensive.

On May 16th the patient was anæsthetised and Mr. Macready resected a portion of the tenth rib in the right axilla. A needle put into the underlying membrane revealed pus. The membrane was then incised and there escaped a large quantity of opaque greenish yellow fœtid smelling purulent fluid together with some gas and a very large number of hydatid daughter cysts of various sizes. On inserting a finger into the now empty cyst a second tense membrane was felt presenting towards the wound and fluctuation could be obtained between a hand placed on the abdomen and a finger on this membrane. A needle inserted into this membrane again revealed offensive pus and so, having fixed the membrane to the edges of the wound with a couple of stitches, an incision into it was made and there escaped another very large quantity of fluid similar to that from the first cyst and containing similar daughter cysts in great numbers and of various sizes. The total quantity of fluid from the two cysts measured after the operation was seven and a half pints, but this did not express the total volume of the cysts, as a good deal of fluid was lost at the time of operating. The patient's breathing became easier almost immediately and the bulging in the abdomen caused by the liver disappeared. Two drainage tubes were inserted into the now empty cyst cavities. The wound was dressed daily and there was constantly a free discharge into the dressings. The cough remained troublesome and the expectoration free and highly offensive.

After this operation the patient in some respects improved and in others grew worse, for while his breathing became much easier (the maximum cardiac impulse being now in the fifth space in the vertical nipple line) his cough was more troublesome and distressing and his expectoration gradually increased in amount, rising to 10, 12, and 14 ounces per day, and was constantly offensive. His sleep also became seriously interfered with and he was obliged to assume the upright posture in bed both night and day. He was unable to lie on his back or on one side, for the instant that he attempted to do this a paroxysm of violent coughing would ensue accompanied by the expectoration of the offensive sputum. He was only able to sit straight up or to lean a little forwards and he accustomed himself to sleep with his head and arms resting on a cradle placed in front. The temperature remained high, rising to between 100° and 102° every night and the patient himself began obviously to lose ground. On four days (May 18th, 20th, 27th, and 29th) the sputum was noted to contain some bright yellow frothy material which gave the tests for bile. This led to the belief that the patient had another cyst in his liver which had ruptured through the diaphragm into the base of the right lung and was being coughed up. As the patient's condition was certainly getting worse further surgical help was indicated and it was decided to explore the liver in the hopes of finding this organ to be the seat of another cyst.

Accordingly, on May 30th (a fortnight following the evacuation of the two pleural cysts) Mr. Macready performed a laparotomy and the liver was thoroughly explored and found to be adherent to the abdominal wall along the sites of the two old scars dating back to 1888 and 1889. In other respects, however, the liver appeared to be quite normal and so the wound was closed. While the patient was still under the anæsthetic a fluctuating swelling of about the size of an orange was palpated in the left iliac fossa. A needle inserted into this revealed offensive pus and accordingly it was carefully incised and about eight ounces of very offensive opaque brown fluid were evacuated similar in character to that evacuated at the previous operation from the pleural cavity but containing no daughter cysts. This abscess cavity was definitely shut off above by adhesions and certainly had no connexion with the liver. Below it extended downwards and inwards into the pelvis passing beyond the reach of the finger. This was undoubtedly a circumscribed suppurating hydatid cyst in the peritoneal cavity. Into this now empty cyst a drainage-tube was inserted. Subsequently it was dressed daily. The laparotomy wound healed by first intention, although it lay midway between two pus-discharging wounds—one in the right axilla where the pleural cysts were draining, and the other in the left iliac fossa where the peritoneal cyst was draining. The administration of the anæsthetic during the operation was rendered exceedingly difficult and unpleasant owing to the almost incessant coughing and expectoration of filthy yellowish offensive sputum.

The result of this operation was exceedingly unsatisfactory, because although the patient was to a certain extent relieved by the evacuation of the pent-up pus in the left iliac fossa the serious and distressing symptom which it was sought to relieve—viz., that of being unable to lie back or on either side without bringing on a violent paroxysm of coughing accompanied by offensive expectoration and obliging the patient to pass his days sitting upright and his nights leaning forwards on a cradle—was in no wise improved, and in addition he had a wound in the abdominal wall five inches in length, through which the liver had been explored, another wound in the right axilla, and another in the left iliac fossa, the two latter freely discharging pus. The temperature continued to rise every evening to about 100° and the expectoration measured three, four, or five ounces of pus a day. Dr. Emanuel was confident, however, that the patient had another cyst communicating with his liver and his right lung, because he still continued at times to expectorate bile in his sputum This hidden cyst further communicated in all probability with the thoracic wound which was draining the two cysts incised at the first operation on May 16th, as on many occasions the discharge from the wound contained bile and sometimes in considerable quantities. In the hopes of finding this troublesome cyst the right chest was explored with an exploring needle in different places without success. On the afternoon, however, of June 12th a long exploring needle was passed inside the wound in the right side of the thorax in a direction forwards and inwards and at a distance of five and a half inches from the surface of the chest, Dr. Emanuel came upon a hard bulging wall through which he pushed the exploring needle, using some considerable amount of force, and went into what gave the impression of being a cavity. From this he withdrew pus, which was offensive and similar in character to that which the patient had been expectorating. A director was then passed along the needle, and along this director a blunt-pointed bistoury, and a crucial incision was made in the wall of this the third thoracic cyst. 19 ounces of pus escaped and a drainage-tube was inserted. The patient immediately felt more comfortable and was able to lie down on his back and have a good night's rest; he had not been able to lie in a recumbent position for just three and a half weeks. After this he continued to sleep well and in a natural posture and coughed up no more of the yellowish offensive material till June 14th, when he again began to feel uncomfortable, not being able to lie down without the occurrence of a paroxysm of coughing. A careful examination showed that this was caused by the drainage-tube being out of its place, the hole in the cyst wall having closed up. The opening of this cyst was, it will be remembered, five and a half inches from the surface and it was very difficult to be sure whether the drainage-tube was in it or not. So on June 14th Dr. Emanuel again incised with a director and blunt-pointed bistoury and evacuated seven ounces of pus. The patient for the second

time was immediately relieved and able to resume the horizontal posture with comfort. By this time the laparotomy wound over the liver was healed and the wound in the left iliac fossa was very small and discharging only a little pus every day. The thoracic wound was still discharging freely. On June 15th the patient got up, and from this day onwards his condition began to improve materially. His cough and expectoration became less troublesome and his sleep natural and sound. The temperature came down and he began to put on flesh. On the 27th it was again found necessary to incise this deeply situated cyst on account of the cough and expectoration having returned for two or three days, showing that the cyst was not draining properly, and on this occasion two ounces of pus escaped.

In the meanwhile the thoracic wound had been gradually healing and getting smaller and smaller, and it was evident that it was not sufficient for the thorough drainage of the third pleural cyst, the opening of which was five and a half inches from the surface. This opinion was supported by the facts that the patient's expectoration still amounted to six ounces of pus a day and that during the last week in June it had contained bile on two occasions. Accordingly it was deemed advisable to enlarge the thoracic wound and this Mr. Macready did on July 1st by resecting a piece of the ninth rib immediately above the former resection and making one large wound. At the time of the operation the cyst had been emptied by the patient's coughing and it was not possible to find one's way into the cyst. Consequently the patient was doomed to another two bad nights in which he was unable to lie on his back or on his side without bringing on a paroxysm of coughing and expectoration. On July 3rd, however, the cyst having become more or less filled up again, it was possible to incise it again and to insert a drainage-tube, this time with permanent good result, the cyst from now onwards draining thoroughly well. From this date the expectoration began to diminish rapidly and very soon ceased altogether; no expectoration was coughed up after July 5th. The patient began to eat well, to sleep well, to put on weight, to lose all pyrexia, and soon to look a very different man. On July 9th he was again allowed to get up. On the 17th the tube was left out of the wound in the left iliac fossa. On the 24th the wound in the left iliac fossa had healed up entirely. By August 15th great strides had been made. The thoracic wound was draining freely, and the tube was being gradually shortened. The patient had no cough and no expectoration. He ate and slept well and the temperature had been normal for the preceding four weeks. On July 23rd and the following few days there was a return of the expectoration of the golden-coloured offensive sputum which caused considerable anxiety for a time, suggesting the possibility of having to grapple with another cyst. The alarm, however, proved to be unnecessary, for after a few days it ceased spontaneously and did not return. It was probably due to some temporary interference with drainage. On Sept. 11th the tubes were left out of the thoracic wound which was still discharging freely. The patient was doing well in every respect. On the 30th all discharge had ceased. The thoracic wound had quite healed. The patient had gained two stones in weight during the previous three months. He looked and felt quite well, ate well, slept well, had no cough or expectoration, could run upstairs without getting short of breath, and had no pain. The pulse, respiration, and temperature were normal. He was well marked with scars, of which he had five—(1) the scar of the laparotomy wound of May 30th, 1899, which lay between; (2) the old scar of 1888 on the left; and (3) the old scar of 1889 on the right; there were also (4) a scar in the left iliac fossa and (5) a scar at the seat of the thoracic wound. The only abnormal physical signs were in the right chest and consisted of impairment of the percussion note below the angle of the scapula and slightly weak breath-sounds at the right base. The heart's apex beat was in the fifth space, half an inch internal to the vertical nipple line. The patient was discharged from the hospital on Sept. 30th, 1899, and has remained perfectly well and at his work up to the time of writing (Sept. 27th, 1900).

CARDIFF INFIRMARY.—At a meeting of the managing committee of the Cardiff Infirmary held on Oct. 10th it was stated that the overdraft due to the bank had now reached £3600.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON

The Etiology of Rheumatic Fever.—A Case of Pulmonary Valvulitis.—Sarcoma of the Lung and Supra-renal Body.

A MEETING of this society was held on Oct. 16th, Mr. WATSON CHEYNE, the President, being in the chair.

Dr. F. J. POYNTON and Dr. ALEXANDER PAINE made a communication on the Etiology of Rheumatic Fever which was an extension of their paper of the same title which was published in THE LANCET of Sept. 22nd and 29th, 1900. The present communication consisted of three parts. The first gave an outline of the experimental results obtained in rabbits with a diplococcus isolated from eight cases of rheumatic fever up to the date of the completion of the original paper in June. To these results were added some new facts ascertained since that date, and three more cases of rheumatic fever in which they had found the organism. The second part consisted of a demonstration by a series of lantern slides showing the identity of the lesions of rheumatic fever in human beings with those produced by the diplococcus in rabbits. The third part consisted of a series of microscopic specimens illustrating the morbid changes that were produced by the organism in man and in rabbits. Sketches and cultures were also shown in illustration of the paper, as was one macroscopic preparation. Dr. Poynton and Dr. Paine laid stress upon the fact that the cases of rheumatic fever chosen as the clinical basis of the original paper were characteristic ones and none of them doubtful. They briefly recapitulated the experimental results which had been obtained up to June last and described in more detail the newer facts. In one case they had isolated the organism from the throat in a case of rheumatic angina. The diplococci had been grown in pure culture in a medium of milk and bouillon rendered slightly acid with lactic acid and then transferred to blood agar. Injected by Mr. H. G. Plimmer, pathologist to St. Mary's Hospital, intravenously into a rabbit they rapidly produced death from acute valvulitis. The organisms were then isolated from the blood and cerebro-spinal fluid and cultivated as before. Injected into a young rabbit they produced polyarthritis and endocarditis. The joint effusion was considerable, but eventually disappeared entirely and the animal made a complete recovery. Since June they had detected the diplococci in three more cases of rheumatic fever, making 11 altogether, and had obtained them from the bladder after death from rheumatic pericarditis. They had also isolated them from the urine during an acute attack of pericarditis. The diplococci isolated from the urine were grown on blood agar and injected intravenously into a rabbit. Acute pericarditis, aortic and mitral valvulitis, pyrexia, wasting, and arthritis followed and resulted in death upon the twentieth day. There was no suppuration in any of the viscera. They also detailed an experimental result in which for some days definite involuntary clonic movements were noted. The movements had the characters of a chorea and in addition the animal was very nervous. With the chorea there was valvulitis. The microscopic investigation of the tissues had not yet been completed. One detail which they had recently ascertained was, they believed, of great importance. In the pericardial exudation of a rabbit that had suffered from pericarditis they had found, in addition to the diplococcus, which was present in scanty numbers, some large solitary cocci. These they had already noticed as occurring when the diplococcus was grown upon unsuitable media, and they had also seen them in the human tissues. They were, they believed, an altered condition of the organism, dependent either upon loss of virulence or alteration in the chemistry of the tissues in which they were located, or upon both factors. They appeared to be an evidence of subsidence of the lesion. The converse of this condition—namely, the occurrence of very numerous and small diplococci—were found in some cases of malignant endocarditis, and this they thought pointed to a local increase in virulence of the diplococci. The latent energy and vitality of the solitary cocci were possibly important from the view of rheumatic relapses. In conclusion, they felt sure that rheumatic fever was a disease to which there was great local resistance, hence the fugitive

character of the arthritis, pericarditis, chorea, and other lesions usually met with in the disease. In several of these lesions they had seen the diplococci taken up by connective tissue and endothelial cells in great numbers.—Mr. EDGAR M. CROOKSHANK congratulated Dr. Poynton and Dr. Paine on their researches and the beauty of their preparations. Various micrococci and streptococci had at different times been associated with various diseases of the internal organs. Some years ago he had brought forward a long list of diseases in which streptococci had been described as a causal agent. He believed they were the consequence, not the cause, of the several diseases. But the evidence adduced in this inquiry was of a totally different character. The chief interest of these researches centred around the inoculation experiments. He remarked in reference to one of the photo-micrographs which had been shown that the organism had some resemblance superficially to that of rabbit septicæmia. It was only a superficial resemblance, but he would like to be quite sure that this disease had been excluded by subsequent inoculation.—Dr. FREDERICK BATTEN remarked on the effect that the poisons seemed to have on the nervous system. One of the rabbits experimented on had had paralysis of the hind legs. This might, he thought, be of a choreic nature because he had known dogs suffering from chorea to have paralysis in the hind legs and choreiform movements in their forelegs.—The PRESIDENT asked how Dr. Poynton and Dr. Paine has isolated the organism from the throat. Bacteria had been found in rheumatoid arthritis and he would like to know whether they thought the organism which they had discovered was related in any way to the one in that disease.—Mr. S. G. SHATTOCK asked how Dr. Poynton and Dr. Paine had differentiated the organism they had found from Fraenkel's pneumococcus.—Dr. PAINE, in reply, said that the kidney had been found to be affected in most of their animals. As regards the procuring of the organism from the throat every care had been taken and great precautions observed to avoid contamination in the inoculations. The results obtained were very constant. As to the isolation of the organism from the throat, this source was used only in the later experiments. Mucus was taken from the tonsils with a needle and placed directly into the medium which had been described and afterwards blood-agar was inoculated.—Dr. POYNTON, in reply, said that the pneumonia and pleurisy which occurred in rheumatic fever were no doubt actually of a rheumatic nature. As regards the possibility of rabbit septicæmia the dose administered had been considerable and the animals would have died within a few hours had it been that virus, whereas they lived many days.

Dr. T. CHURTON (Leeds) read the notes and exhibited specimens taken from a case of Pulmonary Valvulitis. The patient was a child, aged 11 years; she was quite well until five years of age when she had her first attack of rheumatic fever. At the age of eight years she had hæmoptysis and developed pulmonary tuberculosis. The following year she had another attack of rheumatic fever complicated by acute pneumonia. During her last illness there was a loud rushing bruit heard along the second left intercostal space and the case was diagnosed to be one of pulmonary stenosis. After death there was found to be a narrowing of the pulmonary orifice around which was a fringe of vegetations. The ductus arteriosus, septum ventriculi, and foramen ovale were all closed. Dr. Churton suggested, in view of the researches which Dr. Poynton and Dr. Paine had brought before the society, that the pneumonia which complicated the rheumatic fever might have been of rheumatic nature.

Dr. O. K. WILLIAMSON showed specimens of Sarcoma of the Lung and Suprarenal Capsule, remarking that there was no pigmentation of the skin during life.—Dr. A. F. VOELCKER remarked that it was very rare to find pigmentation of the skin associated with disease of the suprarenal capsules.

CLINICAL SOCIETY OF LONDON.

Presidential Address.—Acute Actinomycosis.—Gastrotomy for Hæmatemesis.

THE first meeting of the present session of this society was held on Oct. 12th, Sir RICHARD DOUGLAS POWELL, Bart., who had been elected President for the second time, being in the chair.

The PRESIDENT delivered his opening address, and after some preliminary remarks he presented to the society the thirty-second volume of the Transactions of the Clinical Society of London. He remarked that on looking back over the past three decades the work of the society had completely justified its existence and afforded encouragement for its future development. In his inaugural address in 1868 Sir Thomas Watson laid it down as the great object of the society to attain to "more exact knowledge, and therefore more direct and intelligent purpose and more successful aim, in what is really the end and object of all our labours—the application of remedies for the cure and relief of disease." While rational therapeutics must follow in the wake of advancement in pathology and etiology it was remarkable how often the employment of a remedy had preceded an adequate knowledge of the malady for which it was used. In illustration of this the President quoted the use of mercury, which had been administered for syphilis for nearly four centuries, of digitalis, which had been in use for over a century, of cinchona, of arsenic, and of salicin which had been more recently given in cases of rheumatic fever. Sir William Jenner only 25 years ago spoke at a meeting of that society of "the contagious quality of acute specific diseases as something which was given off from some part of the sick which can, when properly applied, excite the same disease in another person, and which can excite no other disease." During the past 15 years that "something" of which Sir William Jenner spoke had been rendered clear in many of the specific diseases. The triumphs of surgery that had ensued upon an increasingly exact recognition of the organism which was responsible for suppuration were such that they were scarcely able to realise the "dark ages" that ended less than a century ago. The President then referred to the prophylactic measures that were now being adopted and hoped that during the session there would be some contribution on the results of preventive inoculation against enteric fever. The question of artificial immunity was becoming one of increasing importance to the military, naval, and civil services, as their improving home sanitation rendered them increasingly sensitive to diseases which must for long remain endemic in the distant and tropical regions of our vast empire. He then referred to a series of cases in which phlebitis and secondary embolism had occurred after operation which could in no way be accounted for by any imperfection in the operation or in the sanitary surroundings of the patient. Perhaps the cases were explained by an unpreparedness of the patient for surgical injury which caused a morbid reaction to local damage. During the life-time of the Clinical Society of London the use of electricity for diagnostic purposes had made great progress, and in the last few years radiography had been used with excellent results. One of the most valuable contributions to the science of medicine, and one to which the society had largely contributed, was the description and thorough elucidation of the disease now known as "myxœdema." Described first by Sir William Gull, it was afterwards thoroughly investigated and reported on in a special volume of the Transactions of the Clinical Society of London by a committee presided over by Dr. W. M. Ord. The subsequent treatment by thyroid extract gave an impetus to the investigation of the influence of internal secretions upon mental and physical health and upon formative symmetry, and the most recent and suggestive outcome in this category was that of the relationship between disease of the pituitary body and that want of control of growth which characterises acromegalous disease. The President concluded by remarking that a glance through the records of work done by the society gave encouragement and suggestions for work in the present and future.

Sir DYCE DUCKWORTH read notes of a case of Acute Actinomycosis occurring in a youth, aged 19 years, who was admitted to St. Bartholomew's Hospital on Sept. 28th, 1899, complaining of pain and swelling on the lower part of the chest. There was a history of gastric pain after food some months previously, but this had passed off. On admission the temperature was 99° F. and the pulse was 100. The respiratory movements were deficient in the left lower lateral region of the chest, where a bulging gradually became apparent, which was more prominent in the left hypochondriac region. There was dulness on the left side in the axillary line below the sixth rib, where the breath sounds were absent. There was also dulness for four inches behind on the left side with friction crepitus. The bulging was partly thoracic and partly abdominal and appeared to involve the left lobe of the liver. The tumour was very tender on

palpation. It moved to some extent with the diaphragm. On Oct. 25th the temperature rose to 102·2° and on the 26th to 102·8°. Abscess of the left lobe of the liver was suspected and attempts were made to locate the abscess but without success. Sir Dyce Duckworth suggested the possibility of its being case of actinomycosis, but a diagnosis could not be made. The patient was then transferred to the care of Mr. Howard Marsh who carried out further explorations but without result. On the 25th laparotomy was performed and a swelling situated below and behind the left lobe of the liver was found but no pus was reached. The patient's condition became worse and ultimately he died. At the necropsy a softened patch was found near the cardiac end of the stomach and a probe readily passed through it into a mass of spongy actinomycotic growth in the left lobe of the liver. The growth had evidently spread indiscriminately, involving the liver, the diaphragm, the left lung, and other parts. There was a subphrenic abscess of considerable size containing pus of a yellowish-green hue with numerous dark green or black granules which proved to be masses of ray fungus. No septic organisms were present. In the absence of data enabling the diagnosis to be made during life iodide of potassium was not given. Sir Dyce Duckworth questioned the probability of the infection having taken place through the gastric ulcer, since if that had been the case other infective matter must have entered also. He recalled a very similar case in the St. Bartholomew's Hospital Reports for 1895. Both of these cases showed that the form of this disease as met with in man might be attended by considerable burrowing and some suppuration internally.—Mr. HOWARD MARSH remarked that considerable attention had lately been directed to the subject of sub-diaphragmatic abscess. This was the first case of that condition depending upon actinomycosis which had come under his notice, although there had been cases recorded where actinomycosis had started in the appendix and spread upwards to the lower surface of the diaphragm, to the lungs, and even to the pericardium. He thought that in the present case it was quite possible that the infection might have been introduced through the gastric ulcer in the stomach. It must be considered a rare condition to find actinomycosis in the subdiaphragmatic space. The present case seemed to show that the ray fungus must be a very active pyogenic organism and capable of giving rise to acute infective inflammation. There had been considerable elevation of temperature and constitutional disturbance, yet after death little or no suppuration had been found. From his knowledge of the disease it would appear to be more dangerous in man than in the lower animals. The chief clinical importance of this case lay in its obscurity. Sir Dyce Duckworth's suggestion of actinomycosis seemed probable during life, but there was no actual confirmation of it. The case under discussion seemed to show that but little good was to be derived from surgical measures in such cases.—Mr. RICKMAN J. GODLEE could not agree with the previous speaker that surgical measures were not available in actinomycosis, for when it occurred in the cæcum, the abdominal wall, the face, or the neck the diseased tissues could be scraped and cases recovered. He had come across 15 cases of the disease. There were two points of interest in Sir Dyce Duckworth's case. The first was the involvement of the pericardium, which was probably very rare though not surprising, because the disease spread indifferently among all tissues. The second point was the acuteness or rapidity of the process. Mr. Godlee referred to a case resembling it in this respect. In that instance the disease began in May and the patient died in December. The earliest symptoms pointed to pleurisy which was followed by empyema, the pus being evacuated. Soon afterwards an abscess appeared in the forearm and finally another over the front of the sternum. In the latter position there was dulness and after death a tumour was found there in which the ray fungus was discovered. The treatment by iodide of potassium in some cases was very disappointing, though in others it was very successful. A few months ago he saw a case of empyema which resisted treatment. Subsequently a tumour appeared in the abdomen which was incised. It contained but very little pus but the hæmorrhage was very free, and these features were always suggestive of actinomycosis. The abdominal lesion was scraped and large doses of iodide were given, and the patient made a good recovery.—Mr. W. G. SPENCER remarked that in some cases of intestinal actinomycosis a grain of corn had been found which had been the carrier of the infection, and he asked if search had been made in the case under discussion. He had recently seen a case in consultation with Dr. Blake Maurice of Marlborough which resembled one published by Professor Illick in his treatise and he was thus able to identify the condition. In this case also the process has been very rapid. It started as a swelling and soon resulted in a large brawny induration down the neck. On examining the throat under chloroform the mass was found to protrude into the pharynx. Several sinuses with ragged bluish edges formed in the neck, but they contained only a small amount of pus and a large amount of spongy material giving rise to extreme hæmorrhage. These were the features which belonged to the sinuses of actinomycosis. In two months the patient became very much worse. The sinuses were scraped and iodide of potassium was given but no improvement took place until a month later when 40 grains of iodide were given three times a day. Then the constitutional symptoms improved and the sinuses rapidly disappeared, and the patient was quite well at the present time though there were many scars in his neck. He believed that the disease was much more common among cattle than was generally supposed, and when they presented swellings on the jaw the veterinary surgeon was called in who treated them with iodide of potassium, and the animals were then fattened up and sold for meat. He thought that it was an important question whether in the public interest such procedures ought to be allowed. In Germany such animals were slaughtered and not allowed to be used for food and he thought that that was the proper course.—The PRESIDENT asked what doses of the iodide of potassium had been given in Mr. Godlee's case. It was no use giving small doses. He remembered a case which he had seen with Mr. Godlee in which that remedy was very freely given internally and applied locally without success.—Mr. GODLEE replied that the patient, a girl, aged 19 years, had taken one-drachm doses thrice daily.—Mr. MARSH, in reply, said that his remarks as to the inapplicability of surgical treatment referred, of course, only to deep-seated lesions. In making a diagnosis of these cases it was important to bear in mind that the clubs of the fungus were not always found in man and the diagnosis had to be made by the presence of the mycelium alone.—Sir DYCE DUCKWORTH, in reply, spoke of the necessity for care in avoiding confusion of these growths with syphilomata—a mistake which was liable frequently to occur in view of their curability by iodide of potassium.

Mr. C. W. MANSELL MOULLIN read the notes of three cases in which he had performed Gastrotomy for Hæmatemesis. They will be found in full at page 1125 of our present issue.—The discussion of these cases was postponed for some future occasion, when it was suggested that a debate on the surgical treatment of hæmatemesis should take place.

A vote of thanks to the President for his address terminated the meeting.

BRITISH GYNÆCOLOGICAL SOCIETY.

Treatment in Gynæcological Cases.—Exhibition of Specimens.

A MEETING of this society was held on Oct. 11th, Dr. W. J. SMYLY, the President, being in the chair.

Dr. HEYWOOD SMITH read a paper on Treatment in Gynæcological Cases. He considered that so much predominance had been given to the surgical aspect of gynæcology during recent years that it might not be unprofitable to discuss it from the medical standpoint. First of all he defined his use of the word "treatment" in its technical significance, illustrating it by the remark frequently made, "I did not have an operation but only treatment." He pointed out several difficulties in the classification as to medical and surgical, general and local, and of operations and treatment, whether major or minor. As to operations he said that with their present asepsis some major operations in skilled hands might be less risky to the patient than some minor operations conducted, it might be, with less scrupulous care. So with regard to time it was often a matter of importance to patients to run a little extra risk to have the prospect of cure in a few weeks by some operation rather than to lie up for months while undergoing some prolonged treatment. An organ, as the mamma, which had not been called into active use was, he contended, more often attacked by serious disease than one that had passed through a galactiferous activity, while in the case of the uterus it was the

organ that had been impregnated that was more amenable to disease than one which had not passed through that condition. Dr. Heywood Smith then went briefly through the various maladies in which patience and "treatment" might often bring about a desirable result without subjecting the patient to the (to her) dread of an operation, such as misplacements of the uterus in their earlier stages, chronic inflammations, whether of the endometrium or the cervix, fibrous tumours of the uterus at their commencement, and ovaritis and salpingitis where not gonorrhœal or so chronic as to tend to chronic invalidism. He combated the error that many practitioners fell into of calling granular inflammation of the lips of the uterus "ulceration" of that organ, and with regard to the origin of fibrous tumours he suggested that in many cases they were due to the suppression of sexual impressions, and as to these tumours and inflammatory affections of the appendages, taking into consideration the sexual elements, he prescribed physiological rest. In all these he gave an outline of what the treatment should be before they severally developed into the stage that necessitated surgical interference. In considering cancer—that opprobrium of medicine, inasmuch as all operations for its extirpation were often not necessarily final—as invading both the uterus and mamma, he thought that some method of treatment might be found which would arrest the disease in its earliest stages. He pointed out the necessity of examining every woman complaining of intermenstrual bleeding, contending that the patient's friends and her medical attendant were not infrequently the cause of fatal delay by making light of such premonitory symptoms. With regard to the mamma he contended that morbid conditions of that organ were often secondary to affections of the uterus, and when these latter were cured the mammary trouble subsided. He trusted that the consideration of this subject as tending to prevent the pendulum of practice swinging too much to the surgical side might not prove to have been misspent.

Mr. SKENE KEITH remarked that the society rather tended to ignore the medical side of gynæcology and the paper which they had heard was a welcome change. And yet it was noticeable that in the paper there was evidence of a continual hankering after surgical interference except in the direction where surgery really required to be resorted to early—namely, in dealing with malignant disease. In the case of cancer, whether of the breast or of the uterus, no "treatment" of any kind was permissible in the early stages except removal. Dr. Heywood Smith had mentioned a case in which sarcoma of the ovary was followed by a tumour in the breast, but there was no evidence in the history of the case to show that the breast tumour was sarcomatous. It was a noteworthy point that after operations for sarcoma the patient often remained quite well for nine months and yet succumbed with a return of the disease within 13 months.

Dr. C. H. F. ROUTH compared the various types of gynæcologists to the political types of extreme conservative, extreme radical, and moderate, and said that this personal factor had an influence on the question of operation. There were other points to be considered, such as the wishes and the circumstances of the patient. He related three cases to illustrate the close sympathy which existed between the uterus and the breasts.

Mr. F. BOWREMAN JESSETT commented on Dr. Heywood Smith's statement that cancer of the breast was more common in single women than in married women and said that he would like to know the source of Dr. Heywood Smith's information, for experience at the Cancer Hospital, Brompton, showed the reverse to be the case. He agreed with Dr. Heywood Smith's remarks about cystic breasts. He had found no treatment of any use for this condition and his practice was to send the patient away to the seaside for some months, and if then there was no improvement he advised the removal of the breast, because these cysts were often the precursors of cancer. He had tried oöphorectomy with the administration of thyroid in four or five cases of inoperable mammary cancer, but in none was there any improvement.

Dr. INGLIS PARSONS said that endometritis was often due to prolapse of the uterus, and the erosion and discharge frequently cleared up if the uterus could be kept in position with a pessary. For local application in these cases he had tried pure carbolic, iodised phenol, and liniment of iodine, and had found the last to give the best results. For menorrhagia sometimes no organic cause could be found, and curetting showed no thickening of the endometrium. Some operators under these circumstances had resorted to hysterectomy, but he had obtained very good results from the constant current.

Dr. HERBERT SNOW protested against any "treatment" for tumours in the breast in women after middle age even in the case of cysts, for in his experience such cysts always developed into cancer sooner or later. He agreed with Mr. Jessett that cancer of the breast occurred more often in married women than in single women.

Dr. HENRY JELLETT (Dublin) drew attention to the statement in the paper that the prophylaxis of tuberculosis of the Fallopian tubes was fresh air, and asked if this was so how did Dr. Heywood Smith diagnose the condition? Did he first open the abdomen to make his diagnosis and then use the fresh air cure? Dr. Heywood Smith had also stated that tuberculosis of the tubes was very rare; yet the French school, which attributed the majority of suppurative affections of the adnexa to the gonococcus, admitted that one out of every four cases of pyosalpinx was due to tubercle. The experience at the Rotunda Hospital, Dublin, confirmed the view of the frequency of tuberculous salpingitis.

Dr. H. MACNAUGHTON-JONES agreed with previous speakers that such a paper as this was of peculiar value. From the chair he had repeatedly emphasised the importance of having more medical papers at their meetings. If the purpose of Dr. Heywood Smith's paper was to put a sort of curb on gynæcological operations it was not possible to discuss it exhaustively and in detail, but they must be content with general principles. They must ask, "What is gynæcology doing now?" and the answer would be that it was advancing in proportion as it was based on an accurate pathology; for methods of treatment that were not so based were being discarded, whilst those that had a pathological basis were increasingly successful. True conservatism in gynæcology consisted, not in tampering with disease, but in proceeding at once with radical measures in every case in which there was no definite prospect of cure by milder means.

After some remarks by Dr. FREDERICK EDGE (Wolverhampton) Dr. HEYWOOD SMITH briefly replied.

Mr. F. BOWREMAN JESSETT showed: (1) A large Fibromyoma of the Broad Ligament removed by Hysterectomy; (2) a Fibro-cystic Tumour of the Uterus removed by Hysterectomy; and (3) a large Hydronephrosis mistaken for an Ovarian or Hydatid Cyst.

Dr. HERBERT SNOW showed a specimen of Uterine Fibromyoma removed by Hysterectomy.

Dr. FREDERICK EDGE showed a Myoma of the Broad Ligament removed by Enucleation, the uterus being left behind.

In the discussion on these specimens the PRESIDENT, Dr. F. A. PURCELL, and Dr. SEPTIMUS SUNDERLAND took part.

FORFARSHIRE MEDICAL ASSOCIATION.—A meeting of this society was held on Oct. 5th in the University College, Dundee, Mr. C. S. Young, Vice-President, being in the chair.—The Chairman referred to the loss the association had sustained in the death of the President, Dr. Aymer of Bervie—a man struck down in the prime of life, who had endeared himself to all his patients and would be mourned by all the country-side. The Chairman moved:—

That this meeting of the Forfarshire Medical Association desires to record its deep sense of the loss which the association had sustained in the death of Dr. Aymer of Bervie, the President of the association, and its appreciation of the interest he had taken in the work of the association, and that an excerpt of the minutes of this meeting be sent to his widow.

Dr. R. C. Buist seconded this and drew attention to the fact that though not resident in the district of the association he had become a member and was rarely absent from their annual meetings.—The motion was agreed to.—Dr. A. Don then showed a specimen of Epithelioma of the Penis and of Sarcoma of the Tibia. This latter was removed by amputation through the lower third of the femur from a patient aged 30 years. A section of the tumour was shown under the microscope.—Dr. J. Gray showed a Cast of Hydrocephalus in a boy, aged six and a half years, and also a specimen of Malignant Stricture of the Sigmoid which he had removed by operation. A microscopic section of the tumour was shown, being that of a columnar-celled epithelioma. A cast of the lumen of the bowel from another case of malignant stricture of the sigmoid was also shown.—Dr. Pirie then exhibited and explained

Bedrest the object of which was to keep the patient warm while sitting up. This was effected by means of hot pans passed into the framework. He stated that it was the invention of a lady and read her description to the meeting.—Dr. Buist gave notes of four cases of Abdominal Tumours on which he had operated. In all of these more than one lesion existed. In one case he removed a multilocular ovarian cyst and a second tumour, sausage-shaped, which proved to be a dilated appendix. The patient did well. From a second case he removed gall-stones from a distended gall-bladder, a cystic ovary, and also sutured the crural canal through which bowel had protruded. In a third case he removed the uterus for retroversion and a mobile tumour of the size of a child's head, but this case was still under treatment.—Dr. G. Halley spoke and Dr. Buist replied.—Professor J. A. C. Kynoch gave notes of a case of Henoch's Purpura and made some remarks on this form of purpura. His case was that of a girl, aged eight years, in whom there was first a stage of lethargy followed in 12 or 24 hours by severe abdominal pain and purpuric spots, which then subsided and the patient remained well till another attack. This child had six attacks in two months.—Dr. C. McVicar said he had attended two similar cases, in one of which the heart was affected, and he wished to know if there was any such affection in Professor Kynoch's case, and thought the condition of the heart might explain the symptoms.—Professor Kynoch replied.

FOLKESTONE MEDICAL SOCIETY.—A meeting of this society was held on Oct. 5th at the house of Mr. W. F. Chambers.—Dr. Percy Lewis read a paper on "Local Hospitals with Special Reference to Our Own." The advantages of local hospitals were that cases of sudden acute disease could be treated at once and that a certain number of medical men in the locality could be kept trained in operative surgery ready to deal with such emergencies. They also served as a valuable means of increasing the knowledge of the local profession who should be encouraged to attend operations and see interesting cases. Opportunities should also be afforded to local practitioners who wished to conduct any special investigations. He advocated making temporary appointments on the staff if any local medical man happened to be specially qualified in any subject—e.g., ophthalmic surgery. The staff should be elected by merit and not by favouritism and the members should be helped in every way by the local profession by sending in interesting cases with the history fully detailed. Financial loss generally resulted by being on the staff, owing to the time spent in unremunerative work. To be on the staff of a hospital it was advisable that a man should work harmoniously with his colleagues, should not be injudicious in his conduct, lazy, or apt to use the appointment solely as a means of advertisement. Dr. Lewis considered that a local hospital should always have a nursing institute attached, as it would insure only well-known reliable nurses being engaged.—A most interesting discussion took place, in which the following took part: Dr. T. Eastes, Dr. W. J. Tyson, Dr. P. V. Dodd, Mr. W. F. Chambers, Dr. C. Latter, Mr. Thornton Gilbert, Dr. C. E. Perry, Mr. W. P Barrett, Mr. H. A. Powell, Mr. Randall Davis, Mr. A. J. Gore, Dr. J. Hackney, and Dr. A. E. Larking.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The first meeting of the forty-fifth session of this society was held on Oct. 5th at the Royal Kent Dispensary, Greenwich. The chair was taken at first by the outgoing President, Mr. C. J. Parke, and afterwards by the newly-elected President, Dr. Septimus Sunderland.—The treasurer's accounts and the council's annual report having been adopted and three ordinary members and one honorary member having been elected, a ballot was taken for the election of officers and council for the session 1900-1. The following were elected:—President: Dr. Septimus Sunderland. Vice-Presidents: Dr. George Herschell and Dr. Thomas C. Meggison. Council: Mr. Charles J. Heath, Mr. Arthur E. Joscelyne, Dr. John Matheson, Mr. William Henry Payne, Dr. Robert E. Scholefield, Mr. G. Chisholm Williams, and Dr. H. Bowen Williams. Treasurer: Mr. John P. Purvis. Secretary: Dr. John P. Henry. Librarian: Dr. F. S. Toogood.—Dr. Scholefield showed cases of Tabes Dorsalis and of Disseminated Sclerosis, and two cases of Lupus, one of which had been cured and the other much benefited by treatment by the Roentgen rays.—Dr. Toogood showed a case of Excision of the Knee-joint and a case of Cirrhosis of the Liver with Extreme Ascites which had been very much improved by Morison's operation.—Mr. Chisholm Williams showed cases of Hallux Valgus with Casts, Skiagraphs, and Specimens.—A discussion followed and the meeting adjourned.

READING PATHOLOGICAL SOCIETY.—The fifty-ninth annual meeting of this society was held at the Royal Berkshire Hospital on Oct. 11th.—Mr. J. Bland-Sutton gave an oration on Some Points in the Diagnosis and Treatment of Uterine Fibroids. The orator stated that uterine fibroids were never recognised clinically before the age of 25 years, though they did occur between 20 and 25 years. Uterine fibroids had to be diagnosed from almost every tumour occurring in the abdomen. He dwelt on the difficulty in diagnosis and said that mistakes became more important and dangerous when the diagnosis of fibroids was made in mistake for other tumours, because in these cases operations were not always done and patients had gone about in great misery suffering from sarcoma, dermoid cysts, hydatid cysts, and other tumours which, if diagnosed correctly, would have been at once operated on. The presence of a venous hum on auscultation and metrorrhagia were strong evidence of fibroids. Wandering spleens had a remarkable tendency to get into the pelvis and to cause difficulty in diagnosis. Tumours more or less incorporated with the uterus and accompanied by menorrhagia and metrorrhagia were particularly difficult to diagnose, such as enlarged tubes, retroversion of the gravid uterus, &c.—A hearty vote of thanks was accorded to Mr. Bland-Sutton for his oration and the members and visitors to the number of 40 afterwards dined together at the Great Western Hotel.

PATHOLOGICAL SOCIETY OF MANCHESTER.—The annual meeting of this society was held at the Owens College on Oct. 10th, the President, Mr. W. Thorburn, being in the chair.—The reports of the treasurer and committee having been adopted officers for the ensuing session were elected as follows:—President: Dr. A. T. Wilkinson. Vice-Presidents: Dr. A. Brown and Mr. J. Collier. Treasurer: Dr. T. A. Helme. Secretary: Dr. T. N. Kelynack. Committee: Mr. G. O. Campion, L.D.S., Dr. J. G. Clegg, Dr. F. J. H. Coutts, Dr. A. Donald, Dr. W. E. Fothergill, Dr. F. C. Moore, Mr. J. E. Platt, and Mr. J. H. Ray. Auditors: Dr. A. H. Hopkinson and Dr. M. P. Ledward.—The meeting was mainly devoted to the exhibition of specimens.—Professor Sheridan Delépine gave a demonstration on the Bacteriological Diagnosis of Plague.—Dr. Fothergill showed microscopical preparations illustrating Various Forms of Epithelial New Formation.—Dr. C. H. Melland showed Preparations of Blood presenting Malarial Parasites.—Dr. Moore showed preparations showing Various Lesions of the Liver.—A lantern demonstration of the Pathology and Morbid Histology of General Paralysis of the Insane, by Dr. David Orr and Dr. T. P. Cowen, was postponed until the next meeting of the society.

HOSPITAL SUNDAY IN PLYMOUTH.—Oct 21st is to be observed in Plymouth as Hospital Sunday. The amount received in 1899, as a result of 258 collections, was £809, and from 72 children's collections £67.

KASHMIR MISSION HOSPITAL AND STATE LEPER HOSPITAL.—From the report of the Kashmir Mission Hospital for the year 1899 it is evident that the medical officers, Mr. Arthur Neve, Dr. Ernest F. Neve, and two native house surgeons, have been very busy. The "surgical summary" is as follows: operations, 4148; chloroform administrations, 871; new out-patients, 19,161; total visits, 41,629; medical in-patients, 108 (with three deaths); and surgical in-patients, 1220 (with eight deaths). As usual, the proportion of surgical cases requiring operation was very high: 856 operations were performed for entropion alone and 240 for pterygium. 93 cataracts were extracted, of which 86 were successful. There were 250 operations for bone disease, of which 65 were for necrosis of the tibia. 304 tumours were excised. There were 29 cases of epithelioma of the thigh and 15 of the abdominal wall due to burns and subsequent irritation from the heat of the portable brazier (*kangri*) which the people carry under their clothes in the winter. There were 24 cases of sarcoma. At the beginning of 1899 there were 65 patients in the State Leper Hospital; in the course of the year there were 132 admissions and four deaths. The Maharajah and the State Council made a grant of Rs.5996 to the Leper Hospital.

Reviews and Notices of Books.

The Structure and Functions of Bacteria. By ALFRED FISCHER, Professor of Botany at the University of Leipsic. Translated into English by A. COPPEN JONES. Oxford Clarendon Press. 1900. Pp. 198.

ONE of the most noteworthy features of this excellent work and translation is, perhaps, the suggestions that are made for a new classification of bacteria. We fear that the change in nomenclature would be so inconvenient, the present names being so deeply fixed in our minds, that the suggestions, admirable and scientific as they are, will be very slowly realised, if realised at all. Professor Fischer suggests that the classification of bacteria might be arranged into two orders: (1) haplobacterinæ and (2) trichobacterinæ, divided and subdivided into families. Under the first order would come the coccaceæ with the sub-families of allococcaceæ (including most cocci and, of course, the pathological staphylococci) and the homococcaceæ, which would include the streptococcus. The second family of the order of haplobacterinæ would be the bacillaceæ, which embraces as sub-families the bacilleæ (including the bacillus typhi and coli), the clostridieæ (including the butyric bacteria), and the plectridieæ (including the tetanus parasite). The third family of the first order would be the spirillaceæ (including the vibrio of Asiatic cholera and other vibrios). As to the nomenclature of the genera Professor Fischer suggests the "rod," "spindle," and "drumstick" differentiation, the root words "baktron," "kloster," and "plectron" being suggested for this purpose, and the terminations "inium" for monotrichous, "illum" for lophotrichous, and "idium" for peritrichous types. In this arrangement the root of the word indicates the shape of the cell and the termination the arrangement of cilia. Under the second order—namely, the trichobacterinæ—would come the trichobacteriaceæ as the only family. The classification, however, according to nutrition of bacteria seems more convenient and, perhaps, in general more intelligible. Thus, according to the modes of nutrition, Professor Fischer divides bacteria into the following groups:—1. Prototrophic bacteria (nitrifying bacteria, bacteria of root nodules, and sulphur and iron bacteria). 2. Metatrophic bacteria (zymogenic, saprogenic, and saprophile bacteria). 3. Paratrophic bacteria (occurring only in the tissues and vessels of living organisms). It is pointed out that not only the bacteria but all other organisms can be arranged in these three biological divisions.

As to the origin of these first forms of life the author says that it seems probable that the first organisms did really arise from inorganic matter by spontaneous generation and that, as the evolutionary theory assumes, all other living beings have been gradually evolved from them in continued series. The doctrine of evolution once admitted on these lines it must also be conceded that the evolution of new species is still going on, new organisms arising continually by spontaneous generation. This reflection is enough to stagger the bacteriological student in his endeavour to capture all known species for culture and differentiation.

So far we have referred only to the subject-matter of the first five chapters of Professor Fischer's undoubtedly classical work. Leaving the considerations of morphology, taxinomy, and the distribution and origin of bacteria, we come to some most interesting chapters (Chapters VI. to IX.) on the chemical composition of bacteria, the food-stuffs of bacteria, the respiration of bacteria, the influence on bacteria of physical agents, and, lastly, the action of chemicals upon bacteria and the nature of such action. Then follows the story of bacteria in their relation to the circulation of itrogen and carbon dioxide in nature. We doubt if the subject has ever been presented in a clearer or more attractive light (Chapters X. to XIV.). The remaining chapters (XV. to XVIII.) refer to bacteria in relation to disease, and the interest of the reader is still maintained by the lucid presentation of the subject. Professor Fischer is astute enough to observe in his opening observations on the pathogenic species of bacteria that the descriptions will be confined to the general biological characters of the organism, purely medical questions being left to the specialist who alone is entitled to discuss them. As one of our highest authorities on botanical questions Professor Fischer's account of the pathogenic species remains a masterly piece of writing in spite of this disclaimer.

It is interesting to learn that Professor Fischer discounts somewhat the researches of Buchner on alcoholic fermentation without yeast cells—a series of researches which threatened to overthrow all our notions of fermentation, Fischer says that so far the statement is too incomplete to upset existing theories, and he adds that solid proofs of the existence and activity of the zymase are wanting. He considers that further researches are necessary to show whether a genuine enzyme is the cause of the fermentation, or whether it is not rather due to the pressure extract itself "which is, indeed, nothing more or less than a concentrated infusion of protoplasm squeezed out of the cells and preserved, as it were, in its own juice."

It may confidently be said that Professor Fischer's book is of first importance and that there is no work in the English language which deals so ably with the present position and extent of bacteriological science. The German work has for its title "Vorlesungen über Bakterien," and the lectures were intended by the author to be an introduction to general bacteriology. The German edition is recognised as a standard work upon the subject and we are sure that the English edition will be just as favourably regarded. The work of translation is done with great ability and skill, and it is not difficult to recognise in the English rendering the clear and masterly method of exposition of the German author.

Treatise on Orthopædic Surgery. By EDWARD H. BRADFORD, M.D., Surgeon to the Children's Hospital and to the Samaritan Hospital, Assistant Professor of Orthopædic Surgery, Harvard Medical School; and ROBERT W. LOVETT, M.D., Assistant Surgeon to the Children's Hospital, Surgeon to the Infants' Hospital, Boston. With 621 Illustrations. Second revised edition. London: Baillière, Tindall, and Cox. 1900. Pp. 655. Price 18*s.* net.

ALTHOUGH this is the second edition of this work the progress of orthopædic surgery since the appearance of the first edition has necessitated such large alterations that a great part of the book has been re-written, and it may be looked upon as almost a new treatise. The scope of orthopædic surgery has never been very clearly defined and has varied greatly from time to time. The authors of this work have included all that could reasonably be expected in such a treatise while excluding subjects which do not properly come within the domain of orthopædics.

The descriptions of the various diseases dealt with are clear and exact, and although, as is natural, some diseases are treated with much greater fulness than others it cannot be said that any lacks the full consideration which it deserves. The account of congenital dislocation of the hip is especially good. With regard to its etiology the authors do not favour the view that it is due to an arrest of development of the acetabulum, for they hold that the deficiency of development which is met with is no more than should result from the absence of the head of the femur from the cotyloid cavity; they do not, however, offer any more feasible explanation.

In the account of caries of the spine we are told that a retro-pharyngeal abscess resulting from cervical caries is

best opened by using a partly protected bistoury through the mouth. This is directly in opposition to modern surgical teaching; for when the abscess is thus opened it is hardly possible that the abscess cavity should not become contaminated by micro-organisms from the mouth, with the result that the morbid process in the vertebræ is accelerated and that sapræmia occurs. A retro-pharyngeal abscess should be opened by an incision along the posterior border of the sterno-mastoid; in this way the contents are readily evacuated and the chance of septic infection is much lessened.

In the account of rickets the statement is made that "Hutchinson's teeth" are met with in that disease. Certainly in rickets the teeth may be, and often are, malformed, but the typical teeth described by Mr. Hutchinson are not met with in rickets. In the account of "housemaid's knee" the bursa which lies beneath the ligamentum patellæ is called the "deep prepatellar bursa"; this is surely a misnomer, for the bursa is not prepatellar in the least degree. The chapter on flat foot gives a very good account of the causation, pathology, and treatment of this condition, and many other portions of the book might be named which are deserving of high praise. The only objection that might be brought forward is that in treatment the authors are not always sufficiently definite in saying what methods they themselves consider to be the best.

The book is adequately and even profusely illustrated, but some of the plates which have been reproduced photographically show very little detail.

A Short Practice of Gynecology. By HENRY JELLETT, B.A., M.D Dub. London: J. & A. Churchill. With 125 Illustrations. Crown 8vo. 1900. Pp. 436. Price 7*s.* 6*d.*

THIS little manual is a worthy companion to the author's "Short Practice of Midwifery," a second edition of which has already appeared. Like that book, as Dr. Jellett tells us in the preface, it represents in its essentials the practice of the Rotunda Hospital, Dublin, and it has on that account an added interest. The book consists of two parts. The first 15 chapters treat of the affections of the genital organs and the remaining eight of the various gynæcological operations.

In considering amenorrhœa and menorrhagia the author adopts the division of their causes into those arising (1) in the genital system, (2) in the nervous system, and (3) in the circulatory system. This classification we can from experience commend for teaching purposes. In classifying vulvitis, as also in the case of vaginitis and endometritis, the author has endeavoured to adhere to an anatomical classification and accordingly he divides the different forms of vulvitis into (1) catarrhal, (2) exudative, and (3) phlegmonous. This division is no doubt a good one, but the word "anatomical" hardly expresses its exact character.

In describing the various forms of displacement of the uterus use is made of an artificial position of equipoise, as it were, of the uterus, which is defined as follows: "When the axes of the body and of the cervix of the uterus coincide and are vertical the uterus may be regarded as being neither in a position of version nor of flexion." Departures from the position are considered to represent the various conditions of version and flexion. This scheme should tend to obviate some of the difficulties met with by students in understanding displacement of the uterus. A good description is given of the important subject of chronic endometritis and the author assigns as its causes congestion of the uterus and bacterial invasion. The debateable question as to the conditions under which fibro-myomata of the uterus should be operated upon is not very definitely answered, and no doubt the author is wise in not attempting to lay down hard-and-fast rules upon a matter with regard to which there is so much difference of opinion. The chapter upon Malignant Growths of the Uterus, and that upon Ovarian Cysts are both good. The pathology of mucoid and dermoid cysts of the ovary is particularly clearly described. From a perusal of the section upon the Operative Treatment of Inflammatory Conditions of the Appendages we gather that the practice at the Rotunda Hospital is to employ either the abdominal or vaginal route impartially under varying circumstances.

The last eight chapters contain clear descriptions of all the most important major and minor operations of gynæcology. The book is clearly arranged and well written. It is evidently the work of one who is accustomed to teach with method, and it should prove of considerable value to the student.

A Manual of Physiology, with Practical Exercises By G. N. STEWART, M.A., D.Sc., M.D. Edin., Professor of Physiology in the Western Reserve University, Cleveland, U.S.A. With 336 illustrations and five coloured plates. Fourth edition. London: Baillière, Tindall, and Cox. 1900. Demy 8vo. Pp. 894. Price 15*s.* net.

THE present edition of Professor Stewart's well-written treatise has undergone revision and has been augmented by the addition of about 50 pages. The alterations and interpolations in the course of the first 400 pages are but slight and scarcely more than verbal. The sphygmometer of Hill and Barnard is, however, given with a drawing, and a description, with woodcut, of Dr. R. E. Dudgeon's ingenious little sphygmograph is introduced. Dr. Pawlow's experiments on gastric secretion, showing the direct influence of the nervous system on the discharge of the secretion, are described in fuller detail than in the previous editions. A section has been introduced giving the characters of the sediments in acid and alkaline urine respectively. The origin of the urea of the urine is discussed at great length and much evidence is adduced rendering it probable that it is formed in the liver by a process of oxidation of the proteids. The isolation by Professor Abel of a benzoyl compound in the juice of the medullary portion of the adrenals, apparently causing the rise of pressure when that juice is injected into the vessels, is mentioned. The changes occurring in the contraction of muscle as illustrated by Rutherford and Schäfer are fully described. The chief additions that Professor Stewart has made are under the headings of muscle and nerve, but even here the main body of the text has been but little altered. We venture to advise Professor Stewart to abstain from materially increasing the size of the volume: it has reached the limits of one volume. His efforts should be directed to compression rather than to expansion. As it stands at present it will serve to give the student or practitioner a very sound knowledge of modern physiology.

JOURNALS.

Revue de Gynécologie et de Chirurgie Abdominale. Tome IV., No. 4, July—August, 1900. Paris: Masson et Cie. —This number contains the following original articles. An Anatomical Study of the Fascia Enveloping the Hypogastric Arteries, by M. Paul Petit; the Remote Results of Abdominal Hysterectomy for Cancer of the Cervix of the Uterus, by M. C. Jacobs; Pulmonary Embolism following Operation for Fibro myomata of the Uterus, especially Hysterectomy, by M. G. Michel; Medullary Anæsthesia or Sub-arachnoid Injections of Cocaine, by Professor T. Tuffier; and, lastly, an elaborate article upon the Use of Autoplastic Sutures in the Operation for the Radical Cure of Hernia and in Laparotomy, by M. L. Dartigues.

Practitioner.—All the original communications in the October number deal with plague, the individual contributors and their subjects being as follows. Mr. James Cantlie wri'es

on the Symptoms, Pathology, and Treatment of Bubonic Plague. He recommends Haffkine's fluid for inoculation as a prophylactic, and says that plague patients are infective for at least one month after the subsidence of the fever. Dr. Patrick Manson describes six cases of plague which came under observation at the Seamen's Hospital, Albert Dock, on the Thames, two in 1896 and four in 1900. Three patients died in the hospital, one was dead on arrival, and two recovered. Dr. R. Tanner Hewlett has an illustrated article on the Bacteriology, Bacteriological Diagnosis, Dissemination, Prophylaxis, and Serum-Therapy of the disease. Mr. David C. Rees writes on Plague in English Seaports, and Dr. A. K. Chalmers of Glasgow on the Preventive Aspects connected with the Occurrence of Cases of Plague. Finally, Dr. W. Collingridge describes the methods adopted for the medical inspection of vessels entering the Port of London and the precautions used for the discovery of infectious disease.

Edinburgh Medical Journal.—In the October number Dr. H. Macnaughton Jones publishes a long paper on Affections of the Female Genitalia as Causal Factors in the Etiology of Neuroses and Insanity. He mentions that he has never seen any injurious mental consequence follow a gynæcological operation in a healthy woman; he has met with only two cases of post-operative insanity, one of the patients having previously been in an asylum, and the other, an official in a private asylum, having been a typical neurasthenic for some years. Under the heading of Recent Advances in Medical Science Dr. A. Lockhart Gillespie notes some of the latest contributions to the symptomatology and treatment of plague. Dr. R. T. Williamson writes on the Clinical Forms and Pathological Anatomy of Spinal Syphilis, and Dr. S. W. Carruthers publishes an instalment of his papers on the Mechanism of Articulate Speech. Medical Education in the United Kingdom is dealt with in an Appendix of 36 pages.

Scottish Medical and Surgical Journal.—In the October number Dr. W. Leslie Mackenzie writes on the plague, with special reference to its appearance in Glasgow. Dr. Theodore Shennan gives a *résumé* of our knowledge of diseases transmissible from the lower animals to man, the examples instanced being tuberculosis, diphtheria, scarlet fever, glanders, farcy, anthrax, plague, foot-and-mouth disease, and rabies. Professor Thomas Annandale writes in favour of excision of aneurysms of the limbs, provided they are tolerably circumscribed and free from complication. He considers that for important arteries a properly prepared silk ligature is the safest and best. Mr. C. W. Cathcart describes a simple form of steriliser for surgical dressings in which steam heat is applied by means of water contained in an outer jacket. An article on Medical Education in Scotland gives copious details relative to the various educational and examining bodies.

New Inventions.

A NEW AMBULANCE CARRIAGE.

AN improved form of ambulance carriage, of which we give illustrations, has recently been designed and built by the St. John Ambulance Association for the Wanganui (New Zealand) Branch of the Association. In general arrangement it is a covered van fitted with a well the bottom of which is about 16 inches from the ground. At the rear of the carriage are two doors as shown in the illustration. The carriage is adapted to carry two patients, one in a recumbent position on a Furley stretcher fitted with telescopic handles placed on the near side of the carriage and the other in a semi-recumbent position on a seat fixed on the off side. With a view to economise room and reduce the length of the carriage the space under the driver's seat has been thrown into the interior, and part of it gives room for the foot of the stretcher, while in the remainder a locker has been fixed in which surgical or first aid appliances can be carried. In this particular carriage a "medical companion" as approved by the Army Medical Department was placed in the locker. The carriage is built with an ash framework panelled with choice mahogany, the wheels being fitted with india-rubber tyres. It has a smart appearance, it runs

FIG. 1.

Side view of carriage.

FIG. 2.

Back view of carriage.

lightly, and it is easy to load and to unload, the proximity of the well to the ground affording great help to the stretcher-bearers. In addition to being an excellent ambulance carriage the vehicle can be used as an omnibus and is capable of carrying five persons inside in comfort. Mr. S. Osborn, F.R.C.S., approved the design and thoroughly inspected the carriage before it was packed for shipment. A very similar carriage had previously been built by the St. John Ambulance Association for the London Hospital and it is, we are informed, giving complete satisfaction.

THE LANCET.

LONDON: SATURDAY, OCTOBER 20, 1900.

THE complete inefficiency of medical service in the highlands and islands of Scotland is a matter of urgent importance. The lot of the sick poor anywhere is a pitiable one, but it becomes doubly so when the medical man is at a great distance, when no nurse is available, and when all the conditions of domestic comfort are conspicuous by their absence. If our comments upon the situation seem to refer chiefly to the case of the medical officer responsible for the care of the sick poor in these remote regions, where moor and fen and crag and torrent and not seldom the stormy sea intervene between him and them, it must be remembered that to describe the disadvantages of his situation with a view to their rectification is to take an important step towards the better treatment of the poor. We have received and published many communications illustrating the hard life of the medical officer in the highlands and islands of Scotland, but none of them has exhausted the subject. The latest of these, which appeared in THE LANCET of Sept. 29th (p. 967), from the pen of Dr. HENRY PEARSON TAYLOR of Raefirth, Mid Yell, Shetland, in the most moderate terms indicates the impossibilities, the hardships, and the injustice of the position of the medical officer whose lot is cast in these districts. The burden of Dr. TAYLOR'S complaint is that the medical officer is put into a position in which he is compelled to do terribly hard work for such a scanty pittance that he is practically giving his services. He has not only to tend those who are really paupers, but he is expected to take a benevolent view of the sickness and illness of the classes above the line of pauperism. There is a happy conceit in the interesting address of Sir JOHN WILLIAMS, which we published in THE LANCET of Oct. 13th, to the effect that the Good Samaritan was undoubtedly a member of the medical profession. Perhaps the Levite and the other good people, in passing by the wounded man who fell among thieves, comforted themselves with the belief that the Good Samaritan—the doctor—was behind them and would soon come up with more help than they could render. Something of the sort seems still to be the theory in the highly religious country of Scotland, where the whole weight and care of the sick poor are thrown on a medical man who gets less than a week's holiday in a year, who is expected to be a SYME in surgery, a BEGBIE in medicine, a SIMPSON in obstetrics, and a first-class specialist all round, to have all the antiseptic armamentarium of modern operative surgery at his fingers' ends, and to be a sort of paternal providence to the community—and to consider himself remunerated by the receipt, in some places, of as much as 10*s.* 6*d.* a week. This, in a country which spends millions a year for meeting the spiritual wants of its population, is a serious state of matters and is not a little discreditable to all responsible for it, who may be considered to be the State, the Established Church, and the parish council, in the order mentioned.

Unhappily this is not a new scandal. More than half a century ago, in 1846, a voluntary association of medical men was formed, with the public-hearted Dr. ALISON as chairman, whose object was "to express sympathy with their brethren in remote country districts of Scotland in regard to their unremunerated attendance on paupers and to collect accurate information on this subject." An account of this association is given by Dr. JOHN BROWN in his paper, "Our Gideon Grays," from which the following is a quotation:—

"Out of 325 returns 94 had received *some* remuneration for attendance and outlay. In one of these instances the remuneration consisted of 3*s.* for 12 years' attendance on 70 constant and 13 occasional paupers; a fine question in decimals—What would each visit come to? But worse remains. One man attended 400 paupers for eight years and never received one farthing for his skill, his time, or his drugs. Another has the same story to tell of 350, some of them 30 miles off; he moderately calculates his direct loss from these calls on his time and his purse at £70 a year. Out of 253 who report 208 state that besides attending for nothing they had to give on occasions food, wine, and clothes, and had to pay tolls, &c. 136 of the returns contain a more or less definite estimate in money value of their unrequited labours; the sum total given in by them amounts to *thirty-four thousand, four hundred and fifty-seven pounds in ten years! being at the rate of £238 for each!* They seem to have calculated the amount of medical attendance, outlay, and drugs for each pauper annually at the very moderate average of four shillings."

Some means must be found for remedying a state of matters which in most ways exactly tallies with that described by Dr. JOHN BROWN half a century ago. Much assistance in the formation of a judgment as to the nature of these means will be found in a letter (published in another column) from Dr. WILLIAM BRUCE, Direct Representative on the General Medical Council for Scotland, than whom probably no living Scottish practitioner is more familiar with the wants of the medical service in the remote districts of Scotland. The hardness of the conditions is such that no adequate supply of medical help can be secured and no adequate remuneration can be given for medical service in such districts without extraneous support, and this difficulty must increase with every demand for medical service from the various parts of our ever-extending empire. There are clearly two principles in the solution of such a problem. One is the equalisation of such burdens between the State and the parish. We apply this principle in England and in Ireland. It is even in force as between the parishes of the metropolis, where the richest parishes are made to help to bear the burdens of the poorest, and all are the better for realising their mutual debts and obligations. It is simply absurd that the full application which obtains in England and Ireland of so obvious a principle of political economy should still be wanting in Scotland. We venture to hope that Scotland with her rich towns and thriving industries will not much longer abstain from the honourable discharge of her duties to her own poor, whether they reside in Glasgow or in the Hebrides. If she still continues to do so we should be disposed to venture a little farther and to say that before very long

these districts will be still more starved than at present and that the paupers will not be the only sufferers. Already, if we are not misinformed, the supply of medical officers in these parts is not always forthcoming. And there must also be greater security in the position of the medical officer. This has been conceded in England and Ireland and should be immediately granted in the case of Scotland. We do not mean that the local authority should have no power of removal, but that such power must be checked by the right of appeal to the central authority, otherwise, as Dr. BRUCE points out, great hardship and injustice may accrue to the medical officer. We do not deny that the character and the conduct of the medical man in these regions are even more important than in districts where there is a choice of medical men. But, on his side, the medical man practising remote from his fellows is entitled to the protection of a larger judgment than is always to be found in an intensely local body. We cannot doubt that Lord BALFOUR will take the case of the medical officers of the highlands and islands of Scotland into his consideration and secure for them a position that will maintain their efficiency and their self-respect.

WE have from time to time, even at the risk of becoming wearisome by mere iteration, adverted to the question of transport as a most important factor in war. The supply of men and materials to the front in the present war in South Africa has proved to have been a most arduous and difficult task. Even apart from interruptions of the railway lines of communication by the enemy's destructive raids delays are occasionally inevitable under the best systems of military organisation and railway management. We know what occasionally happens in this country in a time of peace in the presence of any unusual strain and can therefore form some idea of what it was in South Africa in time of war. What was the state of affairs there? The narrow gauge of the single line of railway implies diminished power of locomotives and reduced carrying capacity by the rolling stock; the steep gradients and sharp curves which are more or less present throughout the entire system, owing to the natural configuration of the country, make it necessary that the trains shall only be loaded up to the power of the engines hauling them; and the speed, which is governed by the gauge, gradients, and curves, has consequently to be slow. Moreover, the distances traversed were immense. Some idea may, therefore, be formed of the time required to transport and to deliver the materials necessary for the forces operating at the front. Our readers have already had the opportunity of studying for themselves the evidence of Lord ROBERTS and that of the chief of the staff, Lord KITCHENER, and others, in respect of these matters. But we would direct their attention to some remarks on hospital administration which were made by Lieutenant-Colonel RYERSON, M.D., Canadian Commissioner of the Red Cross Society in the South African War, in the course of an address delivered at the annual convention of the Canadian Medical Association at Ottawa, inasmuch as they strike us as both pertinent and interesting at the present time.

The Orange Free State (now Orange River Colony), he says, produced little towards its own support in men and horses. The main artery of communication through the remorseless and arid veldt is a narrow-gauge railway of 725 miles in length between Cape Town and Bloemfontein, where the alleged deplorable state of the sick is said to have taken place. Suddenly 100,000 soldiers and 20,000 camp followers are thrown into the country, already bare and hardly able to feed itself; add to this 25,000 horses, mules, and oxen; all of them, men and animals, have to be fed by this narrow-gauge railway, and all the food-supplies and munitions of war and men and animals as well as miscellaneous hospital stores have to be transported. Then an unexpected epidemic of enteric fever suddenly occurred after the troops had made their forced and rapidly-executed marches and captured Paardeberg and subsequently Bloemfontein. With this enormous increase of sick the strain on the hospital service and all connected therewith may easily be conceived. Naturally, under the circumstances, the field hospitals had to be utilised as stationary hospitals notwithstanding that they were neither equipped nor intended for such work—for which, indeed, they are not at all fitted. The field hospitals are actually with the troops, they accompany and take part in their movements, and have consequently to be provided with a portable equipment in order that they may move readily with the army and receive the wounded from the dressing-stations during or after an engagement with the enemy. Every field hospital should be complete in itself as regards both its *personnel* and material and it should be so constituted as to be mobile and capable of being opened and closed promptly and of temporarily providing for its inmates until they can be transferred to other hospitals along the line of communication and in the rear. Although such are the functions of a field hospital it is easy to see that contingencies may arise, such as those which have occurred in so exceptional a campaign as that in South Africa, in which a field hospital may have in cases of grave emergency to take the place of a stationary hospital for the time being. That is an additional reason why every field hospital should be a complete unit in itself and have its own transport. We have often insisted upon the importance of this provision. The field hospital should, in our opinion, be complete in every detail from start to finish of a campaign. The Royal Army Medical Corps should have their own ambulance complete, including wagons, horses, and mules. We think that the Government of the United States took a wise and absolutely necessary action during their war of rebellion in not allowing the hospital transport to be diverted to any other purpose, except in cases of emergency and under the order in writing of the general in command. There should be no requisitioning of the Army Service Corps in the field, but the necessary hospital transport should be handed over from the beginning and applied exclusively and continuously for the purpose intended. Had this been the case the evil results following Paardeberg might probably either have been averted or been materially reduced.

We quite admit that war is war. The nation has to make up its mind that in this as in all other cases it cannot eat its cake and have its cake. The more rapid

the military movements the more difficult it is for all supply departments to keep pace with them; increase of mobility must carry with it decrease of the weight to be carried; food and ammunition are absolutely essential for the efficiency of a fighting force and for the safety of sick and healthy alike. We cannot expect the enemy to wait until we are ready with all our arrangements, and we must perforce take up the occupation of the places out of which the enemy has been driven and in the condition in which he left them. But that is no reason why we should not earnestly aim at doing all that is right and practicable in warfare to provide against its evil effects. Although some of these evils are inevitable there are others which are avoidable or can be ameliorated. The object of practical hygiene in military and civil life alike is to find out what conditions are modifiable and to do the best to modify them wherever possible to the most favourable advantage.

THE Fifty-fourth Annual Report of the Commissioners in Lunacy for England and Wales for the year 1899, which has just been published, teems with matter for study and reflection. Insanity and the insane are subjects that are still but caviare to the million: they have no attractions for the man in the street, while the interest taken in them by the average citizen is mostly ephemeral and morbid. But to the public official, to the medical man struggling with the personal disorganisation and the domestic turmoil arising from mental disease or defect, to pathologists, and to students of the problems of social life and economics, insanity and lunacy administration are fraught with an interest which if not always spontaneous is at least varied and from some standpoints absorbing. The Blue-book of the Lunacy Commissioners tells of the year's life of aggregated lunacy and gives us a *résumé* of the doings of the asylum population, that inner world in our midst of whose work-a-day existence most of us know little or nothing.

The total number of lunatics in England and Wales on Jan. 1st, 1900, was 106,611, being an increase of 1525 on the corresponding number on Jan. 1st, 1899, as against an increase of 3114 at that date upon the number on Jan. 1st, 1898. The increase in 1899 was less by 1589 than the increase in 1898, and was 550 below the average increase in the 10, and 1079 below that in the five, years ending with 1898. It must not be forgotten, however, that the increase in 1898 was unusually large and that the satisfactory nature of the information does not extend beyond the fact that the big increase of 1898 was not maintained in 1899. And this limitation is emphasised when we find that the ratio of the entire number of officially known lunatics to the estimated total population increased by 0·11 per cent. for the year 1899. In other words, there was on Jan. 1st of this year one officially known lunatic to 301 members of the estimated population, as against one to 302 on Jan. 1st, 1899. The Commissioners state that the number of insane patients admitted into institutions for the insane, or as "single patients," in 1899 was 25 less than the number admitted in 1898, while the number admitted in that year exceeded the number in 1897 by 466; and they think the diminished annual increase in the total number of lunatics now reported is mainly due to the stationary character of the admissions, the cause of which they are unable to determine, combined with the higher recovery and death-rates in the past year.

Of the 106,611 lunatics 58,075 were females and 48,536 were males. The insane patients are summarised under the three heads of "private," "pauper," and "criminal," a classification which no doubt is in some ways serviceable, but which nevertheless is necessarily of a somewhat arbitrary and inexact description. The following are the numbers in the three classes: private, 8813; pauper, 97,028; and criminal, 770. The total admissions in 1899 of lunatics of the several classes were 19,289, being 25 less than the total number in 1898, a feature which the Commissioners, not difficult to please in their search for hopeful points, refer to as being "very satisfactory." In 1899 the patients discharged from institutions for lunatics as recovered numbered 7575, being, as the Commissioners go on to say, in the satisfactory proportion of 39·26 per cent. of the total admissions, and 2·39 per cent. higher than the proportion in 1898, and 0·5 higher than the average rate in the five years 1893–1897. This is a gratifying statement: and it is especially so if we were satisfied that a high standard of recovery-condition in the individuals is maintained throughout. For if, on account of overcrowded asylum wards or for any other reason, patients are in any sense hurried out as recoveries before a due period has been given for convalescence or for the re-establishment of the mental stability so necessary to a successful battling with life,—before, in short, the recovery is sufficiently completed, then a high recovery-rate is anything but an unmixed blessing or a cause for rejoicing. It is not to be denied that the recovery-rate is most creditable to all concerned in bringing it about and merits the appreciation of the public. There were 454 more recoveries in 1899 than in 1898

The deaths in 1899 numbered 8133, and of these 1169 were due to phthisis. There were 21 cases of suicide, and in 20 of these death was brought about by cut-throat in 10 cases, by drowning in two, by hanging in four, and by strangulation in four cases.

With regard to the causes of insanity in the patients admitted the Commissioners give certain tabular information, but they take care to state that they do not regard the information as affording a very reliable guide to the causation of insanity.

Table XVI. in the report gives some figures as to the admissions in the several months of the year, but, as the Commissioners point out, it does not indicate very much difference in the admissions in different seasons of the year, taking the average of the three years 1895, 1896, and 1897. They were, however, most numerous in the second and least numerous in the fourth quarters, the respective numbers being 4750 and 4200. The average proportion of general paralytics among the patients admitted in the five years 1894 to 1898 was 7·6 per cent., and is less by 0·2 per cent. than the average proportion in the five years ending with 1897. The proportion of the average annual number of patients admitted in the five years 1889–1893 who had suicidal propensity was 25·6 per cent., and the corresponding proportion for the five years 1894–1898 was 24·1, or 1·5 per cent. less.

With regard to the locality of treatment of pauper

lunatics the Commissioners state that on Jan. 1st, 1900, only 6·02 per cent. of the registered pauper lunatics lived out of institutions for lunatics or workhouses, while 41 years ago, on Jan. 1st, 1859, the proportion was 18·46 per cent., or more than three times as great. From this it would appear that so far from the boarding-out system, which has been carried out with such satisfactory results in Scotland, being likely to extend in England it is practically being slowly but surely squeezed out of existence.

Dealing with the question of asylum construction the Commissioners say that the arrangement of the buildings of the new East Sussex Asylum and of the acute hospital and working patients' villas at the West Riding Asylum at Wakefield carries the differentiation of asylum buildings to a point further than has been previously reached in asylum construction in England and Wales. They welcome the "new departure" and say there is much to be said in favour of a plan which provides: (1) a more or less separate hospital for the treatment of acute cases and cases of acute sickness; (2) a central establishment of much cheaper and simpler construction in which can be maintained the rank and file of mental and physical decrepitude interspersed with the subjects of troublesome propensities; and (3) a series of simple cottage residences in which the quiet and harmless, the industrious, and the convalescing may live under conditions more closely approximating to those of their previous and normal lives. The experiment, if indeed it can be called an experiment, is assuredly conceived in the best interests of the insane, and we heartily hope it may have an extended trial. And if it can be shown that after the initial expense of their construction, asylums built on the principles here indicated will conduce to a reduction in their cost of maintenance ratepayers and the public will have every reason to be grateful.

The Commissioners refer with a regret in which every right-feeling citizen ought to sympathise to the continuance of the objectionable practice of subjecting persons who are alleged to be suffering from insanity to examination at police-courts instead of at their own homes or at the workhouse. There are in this procedure elements of added suffering to the already distressed minds which would bring most magistrates, if they could but realise the part they are taking, to decline to allow their court to be used for this purpose.

There are two questions pertaining to lunacy legislation to which the Commissioners make pointed reference in their report. These are the question of pensions to asylum officials and the question of the appropriation to other uses of parts of asylums which have been constructed and sanctioned for totally different purposes. We entirely agree with the Commissioners in their strong views, fully expressed, in favour of pensions being secured by Act of Parliament for the members of the staffs of lunatic asylums. In our opinion it is a most suicidal policy in every sense, and a penny-wise-and-pound-foolish policy, not to assure, for instance, the medical superintendent and medical officers that at the end of their responsible and onerous service they will get a reasonable superannuation. The asylum service must in consequence fail to attract men of the right stamp, as, indeed, may already be said to be the case, and it follows that the whole lunacy administration must thereby inevitably suffer. We are not so satisfied that the question of the diversion of asylum accommodation under special circumstances is so completely outside the ordinary inspectorial work and powers of the Commissioners as to call for statutory enactment, but it is possibly a case where the obstinacy of a few (visiting committees and superintendents) compels legislation of a seemingly puerile description to be insisted upon for all.

In consequence of misapprehensions on the subject the Commissioners have felt it desirable to issue the following definition as to what constitutes seclusion: "By seclusion shall be understood the enforced isolation of a patient by day between the hours of 7 A.M. and 7 P.M., by the closing by any means whatsoever of the door of the room in which the patient is."

The Commissioners speak in commendatory terms of the general condition and management of the asylums, registered hospitals, and licensed houses in which the insane are kept. They would be glad to see the number of registered hospitals increased as they recognise in these institutions "a form of philanthropic effort from which the most beneficent results have ensued." We gladly note their anxiety to increase the facilities for pathological research and their recognition of the importance of Dr. F. W. MOTT'S contributions to neural pathology in connexion with his work under the London County Council.

The Commissioners carry out their somewhat invidious task of prosecuting offenders against the Lunacy Act with every possible tact and consideration, and we are sure that the confidence of the public is not misplaced when they leave in their hands the duty of seeing that no lunatic is cruelly treated or otherwise improperly dealt with.

The Commissioners are to be congratulated upon their report of the successful completion of another year's work. It is difficult, nay, impossible, for laymen to realise the great extent of official ground covered by the Board collectively and individually. They can only form an approximate estimate of it even by perusing the Blue-book now under notice with its elaborate tables and its extensive local entries upon the various institutions visited. The number of lunatics has more than doubled in the past 30 years, having risen from 53,177 in 1869 to 106,611 in 1899, while the legislative requirements and the returns have increased in even a larger proportion. During this period no increase has taken place in the number of Commissioners: and surely the time has come when their labours should be lightened by the appointment of colleagues either at the central board or in local districts as in other public departments. For otherwise it is impossible that the work of the Office can continue to be done with that thoroughness which the Commissioners themselves would wish or which the public naturally expect.

If the year 1899 shows only one lunatic to 301 members of the population we fear that the year 1900 may show a much less favourable proportion and we shall be sincerely glad if our fears are not realised. The events connected with the war in South Africa have been a source of national as well as of individual excitement and depression even to gloom, and we shall look forward with much interest to the tale which the Lunacy Commissioners will have to unfold in this respect with regard to the passing year.

Annotations.

"Ne quid nimis."

THE REORGANISED UNIVERSITY OF LONDON.

THE administration of the new University of London is now complete. It was started by the election of a Senate composed of 56 persons (including the Chancellor and the Chairman of Convocation) on Oct. 12th. The first meeting of the Senate will be held on Wednesday, Oct. 24th. The Senate is thus composed:—Chancellor: the Right Hon. the Earl of Kimberley. Vice-Chancellor: Sir H. E. Roscoe, F.R.S. Chairman of Convocation: Mr. E. H. Busk. Four Crown members, including Mrs. E. M. Sidgwick and Sir J. W. Wolfe-Barry, F.R.S. 16 members of Convocation, including Mr. J. Fletcher Moulton, M.P., Sir Albert K. Rollit, Mr. Justice Cozens-Hardy, Dr. T. Barlow and Dr. J. F. Payne, Mrs. S. Bryant, Sir Philip Magnus, and Professor Silvanus Thompson. The election of Convocation members was practically a large majority for the nominees of a ticket issued by Mr. Fletcher Moulton, Dr. W. J. Collins, and Mr. Willis, who secured all the seats (six) in arts and four out of the same number in science. Mr. E. J. Routh, Sir Joshua Fitch, Mr. Armitage-Smith, Professor Carey Foster, Dr. R. D. Roberts, Dr. S. H. Vines, and others were rejected because of their supposed approval of the changes from the old University. The Royal College of Physicians of London elected Dr. W. H. Allchin and Dr. P. H. Pye-Smith, F.R.S.; the Royal College of Surgeons of England, Mr. A. Pearce Gould and Mr. H. G. Howse; University College, Professor G. Carey Foster, F.R.S., and Lord Reay; King's College, the Rev. the Principal, Dr. A. Robertson, and Lord Lister, P.R.S. The legal profession is well represented by Lord Macnaghten and Lord Davey, with other well-known names, the Corporation of London by Alderman Dr. T. B. Crosby, J.P., and the London County Council by Dr. W. J. Collins and Mr. Sidney Webb. Sir Frederick Abel represents the City and Guilds of London Institute, and among the 16 members elected by the various faculties are: in medicine, Dr. J. Kingston Fowler, Dr. E. C. Perry, and Dr. J. Rose Bradford; whilst in science are Sir Michael Foster, M.P., and Professor W. D. Halliburton, F.R.S., Professor W. Ramsay, F.R.S., and Professor W. C. Unwin, F.R.S. Now that the *personnel* of the Senate is so well filled up and the teaching element is brought so completely in line with the institution, we would point out the largeness of the task that is before it as laid down in the statutes. The Senate is to be the supreme governing and executive body of the University and may make statutes, by-laws, regulations, and standing orders, or alter, revoke, and add to them, and in each year shall elect one of its own members to be Vice-Chancellor. There are three standing committees of the Senate to be appointed, and this will be the first duty of the new body. The Academic Council is to consist of 20 members, including the 16 elected by the various faculties, and will deal generally with the matters relating to internal students—i.e., to those who are educated in the schools of the University. The Council for external students is to be formed of 28 members, and will comprise the 16 appointed by Convocation as well as 12 others nominated by the Senate, and they will regulate and report on the standards and examinations for matriculated students who are not working in the recognised schools. The number of the members of the Board to promote the extension of university teaching is at first to be nine, but may be varied at the discretion of the Senate. It is obvious that these committees will plan most of the University work and teaching, although their functions are explicitly stated in the statutes to be merely advisory. The next duty will be the election of boards of studies whose numbers will be decided by the Senate. The members may be teachers or examiners in the faculty, or any other teachers or persons thought fit to be members of each board. These bodies are evidently the most important constituents in the reorganised University, for "the Academic Council and the Council for external students respectively, before advising the Senate upon any matter relating to courses of study, provision for teaching, or research examinations, and the appointment of examiners or the granting of degrees or certificates of proficiency, shall invite and receive reports from the boards dealing with the studies concerned." Each board may report to the Senate on these subjects or any matter referred to it by the Senate, and shall, if requested, deliberate with the Senate or any committee thereof. The faculties are composed of the teachers now approved by the Commissioners in the various schools of the University, other appointed teachers of the University, and such teachers as may be admitted into the faculty by the Senate. They have no fixed times for meeting, but can report to the Senate, and their chief object seems to be the election of representatives on the Senate as was done on Oct. 12th. They must also elect a dean in each faculty to act as chairman and to summon the meetings. Convocation has scarcely any duties or privileges, except to elect its representatives on the Senate and a Chancellor on the death or resignation of the existing one.

THE NOTIFICATION OF PLAGUE.

WE are glad to have called forth by our allusion to this subject the important letters of Dr. Thomas Colvin[1] and Sir William T. Gairdner.[2] Any suggestion from Sir William Gairdner for improvements in sanitary legislation has much weight. He exposes the weak part of the Notification Acts. They only require the medical man to notify when he has come to a definite opinion that the disease is one of the group included in the Acts. This may involve delay, longer or shorter according to the nature of the case and partly according to the acuteness or the temperament of the practitioner. In the case of plague undue delay may be disastrous and in all other cases of infectious disease it is not in the public interest. Sir William Gairdner argues that the Acts should be so modified as to require the practitioner to notify not on a conviction that he is dealing with an infectious disease under the Acts but on a suspicion to that effect. Undoubtedly in many cases this would result in an earlier isolation of an infectious case, but we confess that we doubt the general expediency of sanctioning the notification of suspicions. The case of plague is exceptional and would justify every sanitary authority in special expenditure and efforts to get an early diagnosis. If the powers of such authorities do not extend so far clearly they ought to do so. It seems to us, however, that what is needed is not more notifying power but more medical attendance and, if necessary, the multiplication of medical opinions, with the provision of more isolation wards for suspected cases. The case on which Dr. Colvin and Sir William Gairdner both dwell shows that even in Glasgow as well as in the Hebrides there may be a great deficiency of medical attendance. The patient was seen by a medical man and found to have a temperature of 104° F. and to be "raving," and she was not seen again for 14 days. When Dr. Colvin visited her on Sept. 10th he had no difficulty in diagnosing plague. Obviously what is wanted in such circumstances is the multiplication of medical attendances and medical opinions—at the public expense. This has been already done in Glasgow and to this precaution doubtless, amongst others, we owe the limitation of the disease. The general notification of suspicious cases would, we fear, lead to unnecessary trouble

[1] THE LANCET, Oct. 6th, p. 1040.
[2] THE LANCET, Oct. 13th, p. 1096.

and alarm, and sometimes danger to the patient and to other undesirable results.

ICE-CREAM.

LOVERS of this "delicacy" do not always find it wholesome. About the middle of August there was an outbreak of diarrhœa in the district of Merefield, Freehold, and Sudden in Rochdale, and Dr. J. Henry, the medical officer of health, investigated the cases of 146 persons, of whom 141 had eaten ice-cream supplied by one man. The attacks of illness nearly all commenced on Sunday, August 12th. The ages of the sufferers were from one to 51 years. The severity of the illness varied from slight sickness and fainting to severe vomiting, diarrhœa, dysentery, and death in one case; in some of the cases the temperature was very high and there was extreme prostration. On Monday, August 13th, Dr. Henry visited the premises of the ice-cream vendor and found that all the cream manufactured on the Friday and Saturday had been sold. Two vessels containing ice-cream in process of manufacture were seen to be within a yard of the pail-closet, and the fine strainer used for straining the milk and cornflour after boiling was within about four inches of a dolly tub in which were babies' napkins soiled with diarrhœal excreta. A baby in the house had been suffering from diarrhœa since the previous Friday but had not been medically attended. Dr. Henry is fully justified in his opinion that the contamination must have been introduced into the whole bulk of cream after the boiling process and before the freezing and that the cause of the contamination was probably infection from the diarrhœal motions or from the offensive closet. Considering that the ingredients of ice-cream are admirably adapted for the growth of many kinds of bacteria and that the vitality of these organisms is not destroyed by the lowest attainable temperature there is an obvious risk to the health of the consumer when ice-cream is prepared in close proximity to collections of fæcal matter.

RADICAL MEASURES IN THE UNITED STATES TO PREVENT THE PROPAGATION OF THE UNFIT AND THE DEGENERATE.

THE *Philadelphia Medical Journal* in its issue of Sept. 8th draws attention in an editorial article to the subject of asexualisation as a practical measure for preventing the propagation of certain types of confirmed criminality and degeneracy. Referring to the relative fecundity of the classes which furnish a degenerate or criminal progeny it says: "It requires no mathematician to discover that the shiftless, the thriftless, the indigent poor—the class which produces relatively the greatest number of criminals and paupers, if not of the mentally deficient, are increasing out of all proportion to the thrifty, the well-to-do—the class which produces relatively few of the paupers and criminals. ..... Recent years have added an additional cause—viz., the lavish free treatment by hospitals, dispensaries, and lying-in institutions to all who apply." The result is that the weakling, the physically and mentally incompetent, who would otherwise succumb or perish in the struggle for life, are enabled to persist and to propagate a degenerate population which threatens serious consequences for the future. Among the fruits of our life-saving and life-multiplying measures are the idiot, the pauper, and the congenital criminal. The article maintains that while our duty to humanity will not allow us to refuse medical aid, there remains a means under proper circumstances of preventing the multiplication of certain of these wrecks and derelicts of humanity. If the confirmed criminal, the pauper, the degenerate—who are incapable of regard for law and society and indifferent to the consequences of their own acts—must be supported by the State, then society certainly has the right to say that such at least shall not propagate their kind. "It is stated that Michigan has legalised asexualisation for certain of these unfortunates. Other countries will," says the article, "follow in time." It is contended that a measure like this would at first affect only to a small extent the increase of the population of the degenerate and criminal sort, but it is pointed out that once this measure begins to be put into effectual operation its efficacy will increase year by year. Asexualisation will be regarded by some as a harsh measure, but nothing better has been offered by those who would seek to discourage it, and the future will (it is argued) compel us to take some step to prevent the increase of the hosts of degeneracy and criminality. Regulation of the marriage law would be ineffectual because these individuals have ceased to have respect for the law and the consequences of their own acts. It is known that one State (Michigan) has already legislated on the question, and that another State (Pennsylvania) is preparing special legislative enactments in the matter of preventing the propagation of the confirmed criminal and degenerate. The *Philadelphia Medical Journal* regards these measures as interesting signs of the times, and emphasises the fact that the problem of the propagation of insanity and criminality is assuming an acute phase in some of the States in the Union.

THE BRISTOL ISOLATION HOSPITAL.

THERE is no portion of the equipment of a public health department the advantages of which are more universally recognised than a well-ordered hospital for the isolation of cases of infectious diseases. In most of the largest municipalities of this country such institutions have for many years past been doing excellent work in the direction of lessening, and frequently of actually preventing, epidemics. It has only been necessary in some towns—for example, in Liverpool, Manchester, and Bradford, where commendable foresight has been displayed by the sanitary authorities—to supplement established buildings with suitable additions as the exigencies of an increased population have rendered extension necessary. In others, again, too much reliance has been placed in the past upon the ability of boards of guardians to provide isolation accommodation for those in need of it, so that when it came to be recognised that isolation was necessary not only in the interest of the individual sick person but also of his immediate neighbours these municipalities found themselves in the position of having to erect extensive buildings that ought to have been established years ago. It is remarkable to find among these latter so progressive a city as Bristol, where for years provision for isolation has been most meagre and is even now comparatively of the scantiest. It appears that up to such a recent date as 1886 the sanitary authority of the city shared the responsibility of providing isolation accommodation with the boards of guardians, in what unequal proportions may be gathered from the statement that at one time the boards of guardians could furnish 120 beds and the city authorities only 24, and this small number even in temporary wooden buildings. Latterly, however, the corporation has undertaken the entire responsibility of caring for those who are infected and receives from the board of guardians an annual sum of £300, in return for which all pauper patients are received and treated in the city isolation hospitals. In 1892 the corporation with praiseworthy energy set about the carrying out of its responsibilities and erected at Nover's Hill a permanent administrative block and a small pavilion, and on account of a sudden outbreak of small-pox in 1893 two temporary buildings were erected with accommodation for about 22 patients. In 1896 there was begun the erection of more extensive buildings upon an estate which is situated at Ham Green, some three miles from the city boundaries, 100 acres in extent, and which had been recently purchased

by the corporation together with a large mansion for the sum of £8695. There is accommodation in five pavilions which have been in use for nearly 15 months for 76 patients. It will be observed, therefore, that Bristol can at the present time isolate only 100 infected persons, although the population of the city is considerably over 300,000, a number necessitating, according to the experience of competent authorities, a hospital or hospitals with at least 300 beds. The cost of the Ham Green Hospital, which, by the way, was erected by corporation workmen and without the intervention of contractors, exceeded £500 per bed, and this sum, which is certainly high, appears to have alarmed the citizens of Bristol and to have delayed the carrying out of the completion of the entire scheme by the erecting upon the very ample site a sufficient number of pavilions to meet the requirements of the city; indeed, it would seem that in some quarters the medical officer of health, Dr. D. S. Davies, has been reproved for asking to have the institution "extended" almost before it is completed, whereas in point of fact there has not been strictly any completion. It cannot be too often emphasised that the cost per bed of a hospital always decreases within certain limits as the accommodation is increased. If the number of beds at the Ham Green Hospital were doubled the cost per bed would be reduced probably to a little over £300, for the outlay upon purely administrative buildings, such as laundry, disinfecting, mortuary, and stabling is not duplicated with a duplication of pavilions. We feel sure that those who have really at heart the prosperity and the well-being of the inhabitants of Bristol will not be led away by any motives of false economy, but will give full effect to the recommendations of responsible officials—recommendations which are tendered with a full sense of the gravity of the interests involved.

MENTAL DISEASES AFFECTING THE YOUNG.

DR. F. MAGNIER, in his *Thèse de Paris*, 1900, shows that apart from idiocy and imbecility there are well-marked and characteristic mental diseases affecting the young before adult life is reached. Among these affections dementia præcox, as already shown in these columns,[1] holds a prominent place. The others include acute mental confusion, acute delirium, *folie périodique*, menstrual psychoses, and paranoia. As regards acute mental confusion it is pointed out that whereas Meynert considered the age of election of this disease to be between 20 and 30 years, several cases have been recorded of its occurrence earlier. Thus Trenel has recorded its occurrence at nine years of age in a girl, of alcoholic and neurotic parentage, consequent upon fright, and Mannheimer has recorded other cases in girls below the age of 20 years. Acute delirium with high temperature and adynamia ending fatally is recorded in two cases by Dr. Magnier, both of which occurred in females of the age of 19 years and 26 years respectively. Periodic insanity in 60 per cent. of cases begins before the age of 25 years, the depressive form occurring especially in the decade between 20 and 30 years of age. Dr. Magnier points out that an insane heredity is present in 80 per cent. of the cases, and he cites the case of a girl with periodic insanity which had its onset at the age of 14 years and was marked by agitation, insomnia, and mutism, while in a second case the disease began at the age of 12 years and was marked by suicidal impulses. Two other cases commenced at the age of 18 years and one at the age of 19 years and a month after parturition. The menstrual psychoses are characterised by agitation, loquacity (singing and talking incessantly), and hallucinations of sight and hearing. They occur during menstruation and subside soon after and recur with the menses. The clinical type is that of adolescent insanity. Though paranoia is a disease of adult life yet transitory excitement may occur in youth from time to time as a prodrome. Thus in one case symptoms of suspicion and auditory hallucination began at the age of 22 years and three years later the delusions became well marked. Another commenced at the age of 21 years. From the facts and cases recorded in Dr. Magnier's *Thèse* it thus appears that the period of youth and adolescence is liable to develop a variety of mental affections.

[1] THE LANCET, Feb. 10th, 1900, p. 397.

SANATORIA FOR PHTHISICAL PATIENTS.

IN a report on tuberculosis recently presented to the West Riding County Council, Dr. J. R. Kaye, the county medical officer, makes the suggestion that county councils should provide sanatoria for phthisical patients belonging to the middle classes and that a small fixed charge for maintenance should be made to each sanitary authority sending a patient. This, he says, need not necessarily come out of local rates if the sanitary authority were empowered to obtain it from the patient or by local effort. If 50 beds were provided, and each patient received three months' treatment, then nearly 200 persons could be treated annually. Phthisical patients who are either very poor or actually belong to the pauper class ought to be dealt with by the boards of guardians and the rich have a choice of institutions both in this country and abroad, but nothing has up to the present been done to make the advantages of sanatorium treatment available for members of the working middle class. From inquiries made at various establishments Dr. Kaye finds that the cost of maintenance of each patient receiving treatment in a sanatorium varies from 5*s.* to 6*s.* 6*d.* per day. He also quotes figures as to the cost of erection and maintenance derived from the German sanatoria at Ruppertshain, Worms, Spessart, Munich, Brunswick, Nuremberg, Marcel, Falkenstein, Grabowsee, Bremen, and Würzburg. The ordinary charges made to patients at Grabowsee, Bremen, and Ruppertshain are from 2*s.* to 3*s.* per day.

MOSQUITOES AND MALARIA.

MR. E. E. AUSTEN has published by order of the Trustees of the British Museum an interesting report upon the results of the expedition of Major Ronald Ross, I.M.S., to study the causes of malaria in West Africa. The headquarters of the expedition were at Freetown, Sierra Leone, and cases of fever were studied in neighbouring villages. Immediately after the arrival of the expedition an outbreak occurred at the village of Kissy. In the asylum where the outbreak took place mosquitoes of the genus anopheles were found upon the walls of the building, and Mr. Austen takes occasion to point out that this genus can be easily differentiated from culex by its characteristic attitude when at rest; it appears, in fact, to be standing upon its head, since the body is maintained at an angle of "at least 45°" to the surface upon which the fly is resting. A drawing of the insect in this characteristic position was published in THE LANCET of Sept. 30th, 1899, p. 912. In another place—at Wilberforce—the presence of this particular mosquito was associated with the existence of fever. The coincidence of the fly and the fever was proved by Major Ross to be a real instance of cause and effect, for at Wilberforce the bodies of the anopheletes were found to contain "malaria parasites in various stages." It is, of course, desirable for more than one reason to kill the larvæ as well as the perfect insect, and the work of the expedition was partly concerned with the discovery of the larvæ and with experiments as to the easiest way of killing them. Like other gnats the larvæ are hatched out in quite tiny puddles. As has been shown by other observers the puddles must contain some green weed to serve as food to the developing larvæ. The

easiest way of killing them seems to be by pouring a little kerosene, which forms a film on the surface of the pool and thus chokes the insects which must come to the surface to breathe. Stimulated by the economic importance of these investigations upon the connexion of mosquitoes with malaria the Trustees of the British Museum have issued a short report upon the collections of these flies recently received. This work has been entrusted to the well-known dipterologist, Mr. F. V. Theobald.

HOSPITAL ABUSE AND THE MEDICAL GUILD.

WE give elsewhere (p. 1157) the report of the Medical Guild on the question of hospital reform. The prefatory remark of the Guild only raises our appreciation of their work. They begin by saying that they are impressed with the difficulties surrounding the question. It is obvious, however, that these difficulties will only increase with the lapse of time and that no honest criticism on the subject should be resented or refused by hospital authorities. The Guild does not regard the present inquiries into the fitness of patients as adequate or satisfactory. They are of opinion that by far the greater number of those attending the out-patient department do not require any special treatment and only waste the time and energy of the hospital staff. They consider that the charges exacted from patients are wrong in principle and bad in effect. The profession generally will agree in these conclusions. Meantime the really pitiable and proper cases suffer from inadequate help owing to the presence of crowds of the unfit.

BLOOD-PRESSURE IN ITS RELATION TO ANÆSTHESIA PRODUCED BY CHLOROFORM OR ETHER.

IN the August number of the *Archives Générales de Médecine* Professor Simon Duplay and Dr. Louis Hallion have published a long article on the changes produced in the blood-pressure during anæsthesia from inhalation of chloroform or ether. The object of the investigations which they made on dogs anæsthetised with these substances was to study the respiration and pulse considered in relation to the blood-pressure, the carotid or femoral artery being for this purpose connected with a François-Franck registering manometer and a sphygmoscope, while the respirations were counted by means of a Marey's pneumograph. As is well known the blood-pressure occasionally rises at the commencement of chloroform inhalation and in all cases falls when anæsthesia supervenes. The important, constant, and lasting phenomenon of chloroform inhalation is the fall of the blood-pressure, and the great danger in this form of anæsthesia is the reduction of the blood-pressure below certain limits. Under ether, on the other hand, even when this anæsthetic is given continuously and in relatively large doses, the blood-pressure remains for a long time at about normal or even above normal. In fatal cases of chloroform toxæmia, in certain cases, probably in most, the respiration ceases before the heart's action stops. Many have thought that the stoppage of the respiration was the cause of the stoppage of the heart, so that death under chloroform was really due to asphyxia. Under ether, however, primary heart failure is very rare. Even respiratory failure only occurs, if we omit cases in which mechanical causes for it are present, when the anæsthesia is so profound that the medullary centres are deeply narcotised. In these cases the blood-pressure falls and the mechanism of respiration passes into abeyance owing to the cessation of nerve stimuli from the poisoned centres. In practice these perils practically never occur unless as a result of pre-existing disease or of the oversight of the most obvious signs of danger. Professor Duplay and Dr. Hallion maintain, on the contrary, that in the case of chloroform deaths are never due to failure of the respiration, relying on several arguments, one of which is as follows. When syncope is fully established let artificial respiration be substituted for the natural respiration (currently supposed to be insufficient when the animal is profoundly under the influence of the anæsthetic) and at the same time let the administration of the anæsthetic be continued. If the failure of the circulation which caused the syncope were really due to the anæsthetic interfering with the respiration the syncope ought to be recovered from under artificial respiration, but this, according to Professor Duplay and Dr. Hallion, never happens, for the circulation does not improve and finally stops altogether. M. C. Richet has pointed out that when alarming symptoms are induced by the anæsthetic administered for a surgical operation, artificial respiration and rhythmical traction of the tongue are resorted to the air thereby thrown into the lungs is more than sufficient to prevent death from asphyxia. The real cause of death in such cases is that the cardio-vascular apparatus has been paralysed by the anæsthetic at the same time as are the respiratory centres. Stoppage of the respiration, although not serious in itself, is nevertheless an extremely important symptom, for it indicates the near approach of irremediable interference with the circulation. The patient almost always survives if the anæsthetic is stopped and artificial respiration practised as soon as the natural respiration has ceased, but if at this stage the cardio-vascular apparatus happens to be so affected that the blood-pressure has fallen nearly to zero the case is hopeless. Professor Duplay and Dr. Hallion hope that they will be able before long to describe a method of ascertaining the blood-pressure during surgical operations under anæsthetics.

STREET RUFFIANISM.

WITH the waning of the hours of daylight the Hooligan seems to have taken for his motto the old verse, "Uprise ye, then, my merry men, it is our opening day." His "bag" so far includes a man named Schafer, aged 32 years, knocked down and kicked in Gibraltar-row, Bethnal-green, on Oct. 7th, with the result that he died on Oct. 11th; a boy named Hiscocke, aged 17 years, fatally stabbed in Harwar-street, Kingsland-road, on Oct. 9th; and a man in Hackney killed by a blow on the jaw. To this list may be added an assault upon the landlord of the King's Arms in the Westminster Bridge-road, a murderous assault upon a man named George Acton in Commercial-road, a highway robbery on Hampstead Heath, and two faction fights in Clerkenwell. The inquest upon the body of Hiscoke was held on Oct. 13th, when the coroner's jury returned a verdict of "Wilful murder against some person unknown" and left the matter in the hands of the police. A like verdict was given on Oct. 16th in the case of Schafer. As long as the Hooligan confines himself to pure faction-fighting it would, perhaps, be a pity to stop him, in the hope that by a process of exclusion the contending gangs might gradually be weeded out, but it is a different matter when a gang sets upon an inoffensive passer-by. The law, of course, is to blame, in that the punishment which it inflicts for simple assault, so long as the victim is robbed neither of a few pence nor of his life, is most inadequate. In the former case the assailant gets a long term of imprisonment and possibly in addition a flogging, and in the latter he is, or can be, hanged; but for the ordinary assault a short term of imprisonment is considered enough; and even so magistrates very often do not give as heavy a sentence as they are entitled to. A month or ten days' hard labour, or a trifling fine, which latter is paid by a "whip round" of the gang, is a trivial penalty. It is true that simple imprisonment has no terrors for the rough. There are only two ways of dealing with him—one by inflicting physical pain, the other by making him work, and work hard. All perpetrators of brutal

assaults should be soundly flogged. It would be a good thing, too, as was suggested by one of the morning papers, to levy a sort of blood tax upon the inhabitants of the district in which such outrages take place. A vigilance committee would doubtless be formed and very soon the Hooligan would find the district too hot to hold him. But though no mercy should be shown to the full-blown Hooligan the tender shoot of the same plant should be treated with consideration. The growing boy in London is beset with temptations of every kind, and, despite the enormous sums wasted by the school board in giving an education which they were never meant to give, there are far too many truants. Neither are parents blameless in the matter. As was well shown, however, by a correspondent of the *Times* of Oct. 15th, it is the fatuous way in which the school board selects cases for prosecution for non-attendance which feeds the criminal classes. Mr. C. H. Eliot, the writer of the etter, puts the case very clearly as follows:—

"For instance, guided solely by the registered attendance, the board will apply for a summons against the widow whose eldest son has left school a few weeks too soon, to take advantage of a promising opening and help his mother; while the young *gamin* of 11 who is fast learning the life of the streets escapes for months, and often altogether. Here is the reason. The boy who catches the infectious wandering instinct so common among London boys begins by staying out late at night; then he is away from home all night; next, after an interval of regular school attendance (he is a sharp lad), he is out for three nights; then, after another interval, a week; then a fortnight. During all this time his attendance is but little below the average demanded, and no inquiry is made. So he will go on for months, and then perhaps he is convicted of stealing. All the time he has been an associate of thieves and so becomes one himself. The school board has never found it out, because his average attendance was good enough. But all the time he is a criminal in the making, and it is obviously better that the law should be enforced against him and his parents than against the respectable son of the widow who leaves to help his mother."

Prevention is better than cure: by all means let the murderous rough meet with due punishment, but let us do what can be done to stop him in the making. It is fair to add that a letter appears in the *Times* of Oct. 18th from Sir C. A. Elliott directly traversing Mr. C. H. Eliot's statements.

POST-OPERATIVE HÆMATEMESIS.

THE *Boston Medical and Surgical Journal* of Sept. 27th contains an important paper by Dr. K. Winslow on this obscure subject. Post-operative hæmatemesis is not described in the text-books and is scarcely recognised in surgical literature. In his lectures on the Surgery of the Stomach Mr. Mayo Robson[1] alludes to the subject. He states that he has observed hæmatemesis after operation in cases of intestinal obstruction and tuberculous peritonitis, and after cholecystotomy, choledochotomy, herniotomy, ovariotomy, and simple exploratory laparotomy. Two cases were fatal. In one case cholecystotomy was performed under cocaine for cancer of the common bile-duct. Violent hæmatemesis set in on the day after operation and proved fatal in three days. At the necropsy nothing was found in the stomach to account for the bleeding. Dr. Winslow relates the following case. A very stout woman, aged about 65 years, had for many years an umbilical hernia as large as an infant's head. Vomiting and colic occurred, which lasted six hours. Unsuccessful attempts at reduction were made by taxis and ice-bags. Under ether an elliptical incision dividing all the structures in the abdominal wall down to the peritoneum was made, according to the method of Condemin. The peritoneum was opened on the left side and the finger was introduced into the hernial ring from the abdominal cavity. The sac was completely divided from within by a transverse incision through all the tissues. The contents—the transverse colon, the small intestine, and the omentum—were exposed. There were many adhesions which were readily separated. A small portion of the omentum was ligatured and removed. The whole sac was excised. The wound was approximated with difficulty and was closed by interrupted silkworm-gut sutures passed through all the layers of the abdominal wall. The operation occupied a little over an hour and the patient rallied well. Some vomiting followed but progress was satisfactory. The temperature rose a degree on the second day, but fell to 99° F. on the third. In the evening the patient began to vomit. The nurse noticed for the first time that dark fluid was coming up. About midnight the patient vomited an enormous quantity of dark blood and then suddenly died. At the necropsy much dark clotted blood was found in the stomach and intestines, but no lesion was discovered. There was no evidence of infection. The wound had healed by first intention. A typical instance of post-operative hæmatemesis is recorded in this issue of THE LANCET by Mr. Mansell Moullin. A young man, aged 23 years, died from hæmatemesis within 48 hours after a small incision into the left iliac fossa. The cause of post-opeatrive hæmatemesis is unknown. Vomiting after the anæsthetic will not account for it, for it has occurred in cases where such vomiting was absent. Eiselberg, however, seems to have established some connexion between it and injury of the omentum. In six cases observed by him the omentum was ligatured. In an experiment on an animal multiple hæmorrhages into the stomach followed twisting of the omentum. But Rodman failed to get this result in four experiment. He believes that sepsis is the cause of the hæmatemesis, since sepsis favours disintegration of red corpuscles and the gastric mucous membrane is specially liable to congestions. As to treatment, Mr. Mayo Robson recommends free purgation with calomel and rectal feeding. He has not ventured to operate because the indications were not clear and the patients were not, as a rule, fit to bear a second operation.

[1] THE LANCET, March 10th, 1900, p. 671.

FATIGUE PRODUCTS.

THE eating of "high" game is undoubtedly attended with risks and the poisonous effects are probably due to the toxins produced in the earlier stages of the putrefactive process. The advantage, of course, of hanging game is that the flesh becomes tender and decidedly more digestible than when it is quite fresh. The ripening process, however, may mean the elaboration of toxins. It has been stated that the production of the characteristic flavours of game is related directly to the amount of sulphuretted hydrogen or sulphur-alcohol set free, but it is rather repulsive to think that the delicate flavour of game is dependent upon that invariable product of decomposition of rotten eggs—sulphuretted hydrogen. The smell evolved during cooking of "high" game is even more disgusting. It is a curious fact, however, that game can be made to look "ripe" and green by injecting into the fresh flesh potassium sulphide. The poisonous properties of high game are probably not due to such simple putrefactive products but rather to very complex bodies possibly of the nature of alkaloids. Fresh game, however, sometimes sets up mysterious poisonous symptoms which have been attributed to the fact of the game having been over-hunted and fatigued. Fatigue products indeed have been separated from over-hunted game which, when injected into a healthy animal, have produced marked poisonous effects. There is no doubt that fatigue products under certain circumstances are also elaborated in the human body and give rise to a species of self-poisoning, characteristic symptoms of which are headache, stupor,

and gastric and intestinal pains. The flesh of over-driven cattle may prove poisonous from the same cause. Liebig, for example, mentioned a case in which the flesh of a roebuck, which had struggled violently after having been caught in a snare, gave rise to symptoms of poisoning when partaken of. Again, fatal results ensued when pigs were fed upon the flesh of a horse which had died during its struggles when being broken in. This curious formation of poisonous products in the flesh of animals through a state of terror or exhaustion is a question well worth considering in relation to the wholesomeness of animal foods and emphasises the importance of slaying animals intended for food in the most humane way and without inducing terror or fatigue.

THE ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

THE College of Physicians of Philadelphia announce that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga and amounting to about 180 dollars, will be made on July 14th, 1901, provided that an essay deemed by the committee of award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in medicine, but must not have been published and must be received by the secretary of the College on or before May 1st, 1901. Each essay must also be sent without signature, be plainly marked with a motto, and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author. It is a condition of competition that the successful essay or a copy of it shall remain in the possession of the College; other essays will be returned upon application within three months after the award. The Alvarenga Prize for 1900 has been awarded to Dr. David De Beck of Cincinnati, Ohio, for his essay entitled "Malarial Diseases of the Eye."

THE GENERAL ELECTION.

THE General Election has now (with one exception) decided who are and who are not to represent the country in Parliament, and we have to congratulate the following members of our profession upon their election:—R. Ambrose, L.R.C.P. & S. Edin. (Mayo West); John Dillon, L.R.C.S. Irel. (Mayo East); Sir R. B. Finlay, Q.C., who was at one time a medical practitioner (Inverness Burghs); R. Farquharson, M.D. Edin. (Aberdeenshire); Sir M. Foster, K.C.B., M.D. Lond. (London University); Sir W. Foster, M.D. Erlang., F.R.C.P. Lond. (Derbyshire, Ilkeston); F. Rutherford Harris, L.R.C.S. Edin. (Monmouth District); M. A. MacDonnell, M.D. R.U.I. (Queen's Co., Leix); R. J. Price, M.R.C.S. Eng., who, like Sir R. B. Finlay, long since deserted the profession of medicine for that of the law (Norfolk East); C. K. D. Tanner, M.D., M.Ch. R.U.I. (Mid Cork); and Sir J. Batty Tuke, M.D. Edin. (Edinburgh and St. Andrews Universities). With the exception of Mr. Rutherford Harris, whose connexion with the British South Africa Company is well known, all these gentlemen were members of the preceding House of Commons. Sir Charles Cameron, we regret, did not seek re-election at the hands of his Glasgow constituents. The following medical candidates were defeated: G. B. Clark, M.D., F.R.C.S. Edin.; J. Court, L.R.C.P.Lond., M.R.C.S. Eng.; A. Conan Doyle, M.D. Edin., J. F. Fox, M.D. Univ. Cincinnati, F.R.C.P. Kingston, Canada; A. P. Hillier, M.D. Edin.; J. King Kerr, M.D. R.U.I.; Chas. O'Neill, M.D. R.U.I.; V. H. Rutherford, M.B. Cantab., L.R.C.P. & S. Edin.; E. C. Thompson, M.B. T.C.D., F.R.C.S. Irel., and Sir George Pilkington, M.R.C.S. Eng., L.S.A. Of these Dr. Clark, Dr. Fox, and Sir George Pilkington sought re-election. Mr. Marshall Hall, Q.C., who has been returned for the Southport division of Lancashire, defeating Sir G. Pilkington, is a son of the late Dr. Alfred Hall of Brighton who attended the late Mr. Wakley, M.P., the Founder of THE LANCET.

BACTERIOLOGICAL DIAGNOSIS AND ITS RESULTS.

THE Islington Vestry has set a good example to other vestries in offering to examine the sputum and blood of persons suspected to be suffering from diphtheria, phthisis, and enteric fever. In the second quarter of this year in 57 instances medical practitioners availed themselves of this valuable offer. The results are interesting. In regard to diphtheria 19 examinations were made, of which eight resulted in a positive diagnosis and 11 in a negative; in regard to enteric fever, the blood of 21 persons was examined, in four cases it gave positive results and in 17 negative; in regard to phthisis, the sputum was examined in 17 instances and the bacilli were discovered in only seven specimens. The medical officer of health gives the figures of the Jenner Institute for each of these diseases in the examinations since 1898. Of 171 cases suspected of diphtheria the results were negative in 95. Of 161 cases of supposed enteric fever 93 were negative; of 127 cases examined for tubercle 70 were negative. The public provision made by the Islington Vestry follows logically from the Notification and Isolation Acts and will be much appreciated by the profession until bacteriological work is simplified.

AT the funeral of the late Mr. J. F. France, formerly ophthalmic surgeon to Guy's Hospital, whose death we announced last week, the Royal Medical Benevolent College was represented by Dr. C. Holman, the treasurer, and Mr. J. Bernard Lamb, the secretary, while the Royal Asylum of St. Anne's Society was represented by Captain R. H. Evans, the secretary. The late Mr. France founded nine perpetual presentations for female orphans of medical men, these presentations being held as foundation scholarships at the school of St. Anne's Society, the election of the foundationers being entrusted by deed to the Council of Epsom College.

THE first meeting of the session 1900–1901 of the Odontological Society of Great Britain will be held at 20, Hanover-square, W., on Monday, Oct. 22nd, when the President, Mr. John Ackery, will deliver his inaugural address. The chair will be taken at 8 P.M. Casual communications will be given by Mr. Walter Harrison, on Abnormal Roots; Mr. Sim Wallace, on Twisted Roots; and Mr. W. A. Rhodes, on the Mechanical Treatment of Superior Protrusion. Mr. A. E. Baker will show and present to the museum some interesting old operating instruments.

THE death is announced, at the age of 61 years, of Dr. David Young, formerly resident in the Via Venti Settembre, Rome. The deceased was M.D. of the University of Aberdeen and a Fellow of the University of Bombay and also Examiner in Midwifery. For some years he was, in addition, Professor of Botany at Grant Medical College. He was the author of a work upon Italian climatology called "Rome in Winter and the Tuscan Hills in Summer."

AT the opening meeting of the Cardiff Medical Society, held on Oct. 12th, Dr. Edward Walford read his presidential address upon Reforms in the Procedure of Death Certification. Dr. W. G. Savage gave some interesting details of the methods which were adopted in the bacterioscopic examinations conducted in connexion with the fatal case of plague which recently occurred in the Cardiff Sanatorium.

THE medical service in state at St. Paul's Cathedral under

the auspices of the Guild of St. Luke was held on Oct. 17th. The Bishop of Rochester preached the sermon and the London Gregorian Choral Association—the choir consisting of 300 voices—rendered the musical part of the service in a most impressive manner.

WE regret to learn that Professor A. W. Hughes of King's College, chief superintendent of the Welsh Hospital, now returning home on board the *Saxon*, is suffering from an attack of enteric fever. He is reported to be progressing favourably.

ON the occasion of the Annual Public Night of the Medical Society of University College, London, held in the College on Wednesday evening last, an interesting address was given by Dr. Judson S. Bury on Bias in Clinical Medicine.

THE London County Council have issued a circular drawn up by Mr. James Cantlie upon the signs and symptoms of plague for the use of metropolitan medical practitioners. We shall notice this circular at length next week.

A REUTER'S telegram of Oct. 9th from Brisbane states that a fresh case of plague has occurred there.

THE WAR IN SOUTH AFRICA.

WE are still compelled to speak of the war in South Africa, although it cannot any longer be properly called so, for it has degenerated into a species of what was termed in the last Burmese war, dacoity. The remains of the dispersed Boer forces, aided and abetted by a friendly and sympathetic Boer population, continue to make raids in various directions, to wreck trains and interrupt communications, and to do everything in their power to harass the British forces. The extent of territory conquered and occupied by the Queen's troops, the nature of the country, the length of the railway and telegraphic communications, and a disaffected population, all lend themselves to operations of this irregular kind. The news during the past week is indicative of a recrudescence of a feverish activity on the part of the enemy. Lord Roberts has postponed his own departure and has delayed that of some of the colonial troops until things shall have assumed a more settled and satisfactory aspect. However annoying the present state of things may be it cannot be said to have been unexpected, and the situation has to be faced and overcome. While enteric fever has become far less prevalent than it was there is still a good deal of dysentery—happily of the mild catarrhal and more easily treated form, as a rule—among the troops in the field. The army, as a whole, however, is healthy and in excellent spirits. Lord and Lady Roberts inspected the Langman Hospital at Pretoria on Oct. 19th. Transports with invalids from the seat of war are frequently arriving in this country, and, as a rule, the health of the sick and wounded has been greatly benefited by the voyage.

The Boer prisoners at St. Helena are healthy. Very few of them are in hospital at the present time. Among the deaths that have recently occurred three have been from tuberculosis.

When the history of this war comes to be written the very gallant and plucky defence made by a small force of colonial troops shut up at Elands river camp, Brackfontein, will form one of its brightest pages. Not only is that the opinion of those acquainted with all of the circumstances but the correctness of their judgment has been since ratified and corroborated by Lord Roberts himself in highly appreciative terms. A brief statement of the facts is well worthy of being put on record. The force, composed of Australians and Rhodesians, consisted of 22 officers and 480 men under the command of Colonel Hore. They had with them one small 7-pounder muzzle-loader gun (for which there were only 100 rounds of ammunition) and two Maxims and a large quantity of provisions and stores. It appears that the small garrison held a smoking concert in camp on the night of Aug. 3rd. Early on the following morning the troops were awakened by the bursting of shells in their camp, which covered about four acres on a kopje, and they soon found themselves in a very tight place as they were surrounded by a Boer force estimated at 3000 under the command of Delarey. The only medical officer present with the besieged garrison was Captain Albert Duka, Army Medical Corps, Queensland Defence Force, who had volunteered and had been selected to accompany the Australian contingent to the seat of war. We are indebted to his father, Surgeon-Lieutenant-Colonel Duka, a retired officer of the Indian Medical Service, for the opportunity of reading a communication from his son written from Mafeking, whither he had proceeded after the relief of the besieged garrison at Elands river. We cannot do better than adhere closely to the interesting description of the siege given in this communication. Captain Duka's experience of the war was probably unique. The shelling of the camp began on the morning of August 4th and went on all day. There were 32 casualties, nearly all of which (26) were severe shell-wounds. He was told that there were 1800 shells sent in on that day and 700 on the next; then, either because the Boers were running short of ammunition or because the fighting part of the garrison were disappearing underground, the Boer fire became less lively, although not a single man could move across the square and show his head across the breastwork without having a large number of bullets fired at him. This sort of thing went on for 12 days, when Lord Kitchener arrived with his division. The Boers evidently knew that he was coming and they withdrew their guns two days before, but kept the besieged quiet by sniping. Captain Duka adds that he had no one to assist him who had had any previous training. His hospital consisted of three ambulance wagons and a small four-feet high parapet formed of biscuit boxes round two sides of it. After the second day of the siege, and when the men could be spared for the work, which was all done at night, this parapet was raised another two feet and strengthened by earth and stones thrown up at the back of the biscuit boxes. He had over 70 casualties altogether, five men being wounded in hospital a second time by shells bursting inside it. All the wagons were much knocked about, but Captain Duka fortunately escaped being hurt and was able to carry on his work throughout. There were 73 killed and wounded (51 whites and 22 natives). The great majority, 65 per cent., of the wounds were from shells, and he performed three amputations and had 48 other operations, such as the extraction of bullets, fragments of shell, &c. It must have been very gratifying to this medical officer to find himself on the day after the relief of the garrison presented by the men with the only new pipe in the camp with an inscription cut on the bowl of it and to have heard their cheers in token of their sense of the work which he had done. Nearly all the horses and cattle belonging to the force were killed during the siege. General Carrington, it will be remembered, had previously proceeded to the relief of the very hard-pressed garrison but had been unable to achieve his object. As indicative of the topographical and other difficulties of the country Captain Duka remarks, *à propos* of the attempts to surround De Wet: "In the country we are in it is no wonder that the generals cannot catch De Wet and others, as there are any amount of parallel, or nearly parallel, valleys. One day a patrol of 70 men was out; the Boers knew where we were going and sent 200 men of Delarey's force with a quick-firing gun to catch us, but we came back by another road and although it was only two miles off as the crow flies they either did not know we were passing or could not get at us." It is not hard under such conditions to realise the ease with which the Boers, who know every inch of the country, can elude us. Again, "The reason why convoys are lost is because too few men are in charge, or, as in our case, mounted troops without guns are left to take care of large stores, and although they may manage to keep the post and stores they become practically useless as their horses are destroyed and their mobility lost." In the case of the Elands river the difficulty of the defence, had the siege been prolonged, would have been want of water. There was an ample supply of stores with the force and it was the anticipated capture of these no doubt that led to the attack being made. The Boers never risk fighting in the open if they can help it, but usually keep at a long distance

(1500 yards) off, unless they can secure a strong kopje and well-protected position.

MALARIAL EPIDEMIOLOGY.

A FURTHER "Contribution to the Study of the Epidemiology of Malaria in the Light of Recent Views of its Etiology," by Professor A. Celli, appears in the *Supplemento al Policlinico*, anno vi., No. 48. Researches have been carried on not only on the estate of Cervelletta in the Roman Campagna, but at various other stations in different parts of the Italian peninsula—namely, at Trinitapoli in the province of Foggia, at Argenta near Ferrara, at Mantua in the Ospedal Maggiore of Milan, and at Cumignano in the province of Cremona. Observations were also made in several localities in the province of Novara (Trecate, Cerano, Vercelli, Asigliano), and in the Alpine valley of Sondrio. In this way Professor Celli was enabled to control the facts elicited by a study of the statistics and clinical reports of large hospitals, such as those of Vercelli, Novara, Mantua, and Ferrara, by observations in the Campagna and at the homes of the patients themselves. He was thus able to study not only the mild cases which never find their way to a hospital, but also those which are treated at home and those occurring among persons who leave after the field work is over. Note was taken of the following points. 1. The distribution of the malarial parasite in the peninsula exclusive of Latium. 2. The occurrence of multiple infections and of relapses. 3. The relations of the epidemic with mosquitoes, with agricultural life, and with the temperature.

As regards the first of these, parasites of malignant forms predominate in the provinces of Foggia and Salerno as they do in the Roman Campagna. Professor Celli was surprised to find them also common in the valley of the Po where malaria of the summer-autumn type is distinguished by the peasantry as "August fever," although by medical men, including even Golgi, its existence there was not admitted. He was still more surprised to find a spot in the Alpine valley of Sondrio where at the middle of September all the fever cases were of this grave type. The plain of the Adda in the Lower Valtellina, at an elevation of from 400 to 700 metres, formerly very malarious, still has foci of disease—as, for instance, at Piatèda, near Sondrio, where there were bad autumn tertians and where in a neighbouring marsh larvæ of mosquitoes were to be found. Although these grave tertian forms, with a clinical history similar to that which they present in the Roman Campagna, are common in the valley of the Po the cases, so numerous in Latium, of deadly pernicious malaria are rarely met with. The free use of quinine probably explains this scarcity of pernicious cases, although it has been powerless to diminish the zone of diffusion of malaria in general.

The occurrence of multiple infections—that is, of two or three in the same individual—was observed very frequently. An interesting study, and one of great importance, is that of relapses. True relapses are to be distinguished from pseudo-relapses where we have to deal not with a relapse proper but with a fresh infection of a previously malarious patient. The distinction is not yet possible in the mild tertian, but in the quartan a diagnostic guide is afforded by the fact that gametes are very abundant in the circulating blood of true relapses, whereas they are absent or extremely scarce in the pseudo-relapses. In autumn tertian the differential diagnosis is still easier, the successive attacks of true relapses gradually diminishing so much in force that the patient is able to walk about during their occurrence, whereas a new infection always prostrates, even when the patient has previously suffered from malaria. In true relapses semilunar bodies are present, while they are never found in primary infections. It is interesting to note the course of true relapses in the different types of fever and in the various months of the epidemic year, which Professor Celli claims he has shown to extend from one summer to the next. When the fresh infections of autumn tertian come to an end in October, as happened last year, they are at their maximum in August and September, gradually declining in number through June and July. The relapses of quartan, on the contrary, gradually increase in frequency from October on into July and August, and the summer-autumn tertian re-commences before the quartan, which in Latium, as well as in northern and southern Italy, is the last to yield relapses and the last to begin them. The mild tertians have their maximum of relapses in the spring, as may be well seen in Lombardy, where they precede the development of grave tertians in June. Why the period for the relapses of summer tertian should not correspond with the approach of its epidemic year, as is the case with quartan and spring tertian, has not yet been made clear. Long intervals may elapse between the relapses of summer tertian and of spring tertian Quartan is more persistent and continuous in its relapses in spite of the use of quinine.

As to the relation between mosquitoes and epidemics of malaria, Professor Celli found anopheles wherever there was fever. The commonest variety was the anopheles claviger, but in the neighbourhoods of Ferrara and Vercelli the anopheles pictus and the anopheles pseudo-pictus were also abundant, and in the alpine zone the anopheles bifurcatus. The presence of anopheles was, however, noted in localities which were perfectly healthy and at great altitudes where malaria had never been known. These insects may therefore be conveyed with man and his belongings, hay, animals, vehicles, &c., far from genuine malarious centres; and hence the geographical distribution of anopheles cannot coincide with the geographical chart of malaria. Consequently it cannot be asserted absolutely that the anopheles is always and of itself a sure indication of malaria. But wherever anopheles are present, and there are men with malarial gametes in their blood whom they can bite, and where at the same time the temperature is suitable for the development of the parasite in the mosquito's body, it may be confidently predicted that an outbreak of malaria will occur. In this respect epidemiological studies confirm the experimental observations of Ross, Grassi, Bignami, and Bastianelli on the multiplication in the middle intestine of the anopheles of the parasite of human malaria and on the negative rôle played by the culex in the propagation of this disease. The city of Mantua offers a typically demonstrative instance of this fact, its central part being infested by culex but quite free from malaria, while in some quarters at its periphery where there are innumerable anopheletes in the houses and larvæ of anopheles in the neighbouring lakes and ditches a severe epidemic of malaria has prevailed during the last two years.

It is interesting, Professor Celli remarks, to note the relation in various particulars between malaria and agriculture. Epidemics may arise in connexion with the cultivation not only of the essentially malarial crops such as rice, but also of crops in themselves dry and healthy, when these latter demand the presence of work-people during the unhealthy months for the reaping and threshing of wheat, the harvesting of maize, and the cultivation and ingathering of beetroot. Professor Celli distinguishes two epidemic types. To the one, with its minimum number of cases in June, belong the epidemics of Milan, Pavia, Crema, and Ferrara, and this type is, therefore, specially connected with irrigation crops; to the other, with its minimum of cases in January and February, belong those of Rome, Cagliari, Vercelli, and Mantua. In the first case the epidemic, mostly of mild tertian, commences in June with the cleaning of the rice and reaches its height during the reaping and threshing, when the "August fevers" above mentioned are at their maximum. In the second type the fevers are rare in June, more common in July, and reach their maximum in August after the threshing season. When the summer is prolonged, and in the warmer zones such as the Pontine Marshes, the harvesting of maize in September and October gives rise to a late epidemic. The ever-extending cultivation of beetroot under very insanitary conditions will certainly augment the malaria epidemic. The tanks for the maceration of textile plants (hemp and flax), with their collections of stagnant or nearly stagnant water, by favouring the development of mosquitoes likewise favour that of malaria. The process of maceration itself, regarded as so dangerous that special sanitary regulations are in force regarding it, has, Professor Celli believes, a contrary effect by destroying or retarding the growth of larvæ.

Finally, with regard to the relation between the atmospheric temperature and epidemics of malaria, Professor Celli says that it would appear that the latter must be preceded and accompanied by a temperature of about 25° C. (77° F.), but on this point he reserves any definite opinion for the present.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held on Oct. 11th, the President, Sir WILLIAM MACCORMAC, Bart., K.C.V.O., being in the chair.

The PRESIDENT reported that Dr. Alexander MacCormick, M.R.C.S. Eng., Lecturer on Surgery in the University of Sydney, N.S.W., and recently a consulting surgeon to H.M. Forces in South Africa, had, owing to a capture of the mails by the Boers, not received the invitation of the Council to attend the centenary festival for the purpose of receiving the diploma of Honorary Fellowship. Dr. MacCormick was then elected to the Honorary Fellowship and was introduced and admitted an Honorary Fellow.

The PRESIDENT reported that a letter had been received from the Secretary of State stating that Her Majesty the Queen had graciously received the address of condolence from the College on the death of H.R.H. the Duke of Saxe-Coburg and Gotha.

It was resolved that the first volume of the Catalogue of the Physiological Series of Comparative Anatomy be offered for sale at 12*s.* a copy.

The Council adopted the report of the Finance Committee and passed the balance-sheet which had been approved by the auditors. The chief points in the report are as follows. The gross income of the College for the past year was £25,211; this is an increase of £500 on the income of the previous year. This increase was chiefly due to an advance in the amount of the fees from the examinations for the Diploma in Dental Surgery as a result of an alteration in the fee for the diploma, but in future years the effect will not be so marked, as under the new rules fees are no longer returned to unsuccessful candidates. The fees from the examinations of the Conjoint Examinations Board had diminished by £1094, and the falling off was most marked in the case of the third examination. As the expenditure for the year only differs from the amount of the previous year by £6 there is a credit balance of £1645 on the year. The extraordinary expenditure amounts to £999 and is £453 heavier than the previous year. It includes the costs of the Crown in the appeal respecting the taxation of the College, payment of Corporation Duty for five back years, and the fees for the new charter.

With regard to the regulations relating to the fees for the diploma of Fellow adopted by the Council on July 25th, 1900, the committee are of opinion that some modification is desirable in the case of candidates who commenced their course of examination before that date. The regulations previously in force contained the following provisions, viz.:—

> Provided always that no candidate for the diploma of Fellow shall be required before admission to examination or otherwise to pay altogether more than 30 guineas, and that the moneys paid by each candidate and retained as aforesaid shall be treated as the fee payable and paid by such candidate on admittance to the diploma of Fellow.

The committee think it right that candidates who entered for the examinations for the Fellowship under this condition should be allowed a reasonable time in which to obtain their diplomas without any alteration of the condition, and they accordingly recommend the Council to adopt the following regulation, viz.:—

> Candidates who have presented themselves for examination for the diploma of Fellow under the regulations in force before July 25th, 1900, will not be required to pay altogether more than 30 guineas in examination and admission fees, provided that they become qualified to receive the diploma of Fellow before October 1st, 1902, or within 10 years from the date of their registration by the General Medical Council as medical students.

The Council elected Mr. Arthur S. Underwood a member of the Board of Examiners in Dental Surgery (Dental Section). Mr. J. Langton was elected a member of the Committee of Management in the vacancy occasioned by the retirement of Mr. T. Bryant. Mr. H. Morris was re-elected a member of the Laboratories Committee. The Council nominated Mr. Alfred George Sworn as the eighth Jenks Scholar. Mr. Sworn was recently a student at Epsom College and is now a student at University College, London.

The arrangements for the Cartwright Medal have been completed and a scheme has been drawn up for its award; its chief provisions are as follows. The prize shall consist of a medal and a sum of money which are to be awarded quinquennially for the best essay on a subject previously selected by the Council. Candidates for the prize must be persons engaged in the study or practice of dental surgery and possessing qualifications capable of registration under the Medical Acts of the United Kingdom.

A Member of the College has been called upon by the Council to show cause why he should not be removed from the roll of Members on account of his connexion with the "Drouet Institute," and the attention of the General Medical Council was directed to the advertisements of a person who has illegally assumed the description "R.D.S. (R.C.S. Eng.)," and they were requested to take the matter into consideration with a view to action under Section 13 of the Dentists Act, 1878.

The PRESIDENT reported on behalf of himself and the Vice-Presidents that in pursuance of the resolution of the Council on July 25th last they had addressed a letter to the Marquis of Salisbury again urging his lordship to appoint a departmental committee to inquire into the prevalence and treatment of venereal disease among the civil population of this country, and a reply was read stating that the subject would receive the consideration of Her Majesty's Government.

A vote of thanks to the Centenary Committee was carried.

THE OPEN-AIR TREATMENT OF CONSUMPTION.

A CONFERENCE of the representatives of Poor-law authority in the metropolis was held in St. Martin's Town Hall on Oct. 15th to consider the question of establishing hospitals for the open-air treatment of consumption.

Mr. J. Z. CAHILL, the chairman of the Poplar and Stepney Sick Asylum District Board, presided and there was a very large attendance of delegates, including medical men. Members of the National Association for the Prevention of Consumption were also present, as was Dr. Downs of the Local Government Board, who was not present in an official capacity. The secretary read the following letter which had been sent to the various Poor-law authorities by the Poplar and Stepney Sick Association District Board.

> For some considerable time the Board of Management have had under consideration the subject of the open-air treatment of phthisis with a view to the establishment of a hospital for the special care of such cases. The managers are of opinion that by the proper treatment of the disease in its early stages much good would result to the patient; in many cases probably a permanent cure would be effected, and they are convinced that this would be best achieved and maintained by the open-air method now being advocated in so many quarters. In the Poplar and Stepney District Sick Asylum on a recent occasion there were 65 phthisical cases, many of which would in the early stages of the disease probably have derived much benefit, if not actual cure, could they have had the advantage of the open-air treatment of their ailment when in its incipient stage. After a conference with the representatives of the boards of guardians and medical officers and clerks of the unions comprising the district the question has taken a more practical form and has resulted in a deputation of the managers waiting on the Local Government Board on the subject. In receiving the deputation the Local Government Board expressed its sympathy with the managers in their desire to provide the class of accommodation referred to, but objected to the managers taking individual action in the matter, the question, in the Board's opinion, having a metropolitan rather than a local character, and, entertaining this view, the Board intimated that provision, if made at all, should be for the metropolis as a whole and be under the management and control of a metropolitan authority. The Board also suggested that if the managers felt disposed to pursue the matter further a conference of representatives of each Poor-law authority in the metropolis should be invited to meet and discuss the subject, and in the event of such conference considering the provision of the proposed accommodation desirable it should address the Local Government Board on the subject and thus give the views of the metropolis generally on the question. The managers will feel obliged if you will kindly bring the matter under the notice of your board with a view to a conference being held to discuss the subject. .....

Dr. J. E. SQUIRE said that facts furnished a strong argument in favour of a combined effort on behalf of the London Poor-law guardians to give more effective treatment to the consumptive poor, the proportion of this disease among the inhabitants of the metropolis being greater than in other divisions of England. The habits of life of the poor in this respect were not only a danger to themselves but also to other members of the community. An important point to notice was that by the sanatoria treatment, whilst giving to individuals the best chance of recovery, the importance of hygienic living was impressed upon them and a knowledge of hygiene was likely to be more widely spread.

Dr. NATHAN RAW gave a brief outline of what had been done in Liverpool and the success which had attended the efforts of the Poor-law guardians in the sanatoria treatment.

Mr. J. H. RUTHERGLEN (clerk to the Kensington Guardians) urged that the number of phthisical patients chargeable to

the various boards in London should be estimated and that the Local Government Board should be approached with a view of obtaining sanatoria for the treatment of these patients.

Sir WILLIAM BROADBENT expressed his admiration of the proposal which was being discussed and his sympathy with the objects of the movement. That full advantage of sanatoria might be taken he advocated a system of some kind of notification, not necessarily compulsory, but encouragement to voluntary notification should be given. Everything which tended to remove the unhygienic condition favourable to consumption would also tend to the prevention of other diseases.

Dr. BURTON-FANNING gave his experiences with regard to the open-air treatment of consumption, which were very satisfactory, and suggested that as an experiment rural infirmaries, where he was of opinion that 25 per cent. of the beds were unoccupied, should be utilised as sanatoria.

Dr. A. H. DOWNS, medical inspector to the Local Government Board, strongly supported the movement, pointing out the various advantages which would result from such treatment of the phthisical poor as was advocated.

Mr. B. A. LYON (Hampstead) submitted the following motion:—

That this Conference of Poor-law authorities, having discussed the question of the open-air treatment of consumption, are of opinion that the time has come when provision should be made for the treatment by this method of the sick poor of the metropolis suffering from phthisis and it recommends the matter for the consideration of the Local Government Board with a view to the necessary steps being taken by that Board for the carrying out of the proposal.

This was seconded by Mr. J. O'CONNOR (Stepney) and carried *nem. con.*

Several speakers having expressed the hope that no new board should be formed to carry out the proposed suggestion the following sub-committee was appointed to form a deputation to the Local Government Board: Mr. J. Z. Cahill, Mr. B. A. Lyon (Hampstead), Mr. E. Smith (Bethnal Green), Mr. E. A. Barton (Kensington), Mr. R. P. Long (St. Pancras), and Mr. W. J. Wentenhall, J.P. (St. Pancras).

A vote of thanks to the Chairman terminated the proceedings.

THE PLAGUE.

PRECAUTIONS AGAINST PLAGUE IN LONDON.

THE occurrence of a suspected case of plague in London has served a purpose in demonstrating that the metropolis has not been unmindful of the duties which may have to be performed in the event of this disease appearing among its population. The London County Council have, as already announced, been asked by the Local Government Board if they are prepared to make provisions for "contacts" or families in which a case of plague has occurred. It would appear that the communications between the Local Government Board and the Council have proceeded a step further than could be understood by the report of the Public Health Committee of the Council which we published in THE LANCET of Oct. 13th (p. 1092). A man in East London was suspected to be suffering from plague. The medical officer of health of Limehouse was immediately notified of this case, the medical officer of health of the county of London was duly informed, and the County Council's machinery was at once brought into operation. Mr. James Cantlie, who had been retained by the Council for such purpose, at once visited the patient and, the symptoms at the time being suggestive of plague, material was sent to Dr. Klein for bacteriological examination. The patient was removed to a building which the Council had in their possession and which they had furnished for such cases and safely isolated there pending further investigation. Fortunately, Dr. Klein's examination has conclusively proved that his malady is not plague, but this occurrence has demonstrated the foresight of the Local Government Board and the London County Council in making provision before recognised plague is present in London. Our story would not be complete if we did not refer to the other steps taken to protect the population against risk of infection from this disease. The room in which the patient lived was at once closed and complete measures of disinfection were carried out by the Limehouse District Board, the inmates of the building of which his tenement formed a part were kept under constant inspection, and every care was taken to insure that any extension of the disease should be known at its beginning. Although this man has not suffered from plague his illness has sufficed to show what is London's machinery for dealing with cases of plague. The only authority whose services were not needed in this particular case was the Metropolitan Asylums Board, but there is no doubt that if actual plague had been in question the patient would have been at once removed to one of the Board's hospitals. It may be said that London suffers from division of authority, but when all authorities work in accord the public is well protected. We may congratulate Mr. G. J. Cooper, the chairman of the Public Health Committee of the London County Council, on the fact that the present case of illness, although not plague, has shown that the necessity of being prepared has been well recognised by him and by his committee. The memorandum on plague by Mr. Cantlie, which the Council has prepared for medical practitioners and which was published on Oct. 17th, will serve a useful purpose.

Dr. J. F. J. Sykes, medical officer of health of St. Pancras, has issued a circular to all medical practitioners in his district in conformity with the instruction of the Local Government Board, telling them what to do in case they encounter a case which may be plague. A personal letter has also been prepared which is forwarded to passengers who have been reported by the port medical officer of health as arriving by sea from plague-infected ports and as being resident in St. Pancras.

PLAGUE IN SOUTH WALES.

The Llandaff sanitary authorities are to be warmly congratulated upon the manner in which they have grappled with the plague. It will be remembered that one fatal case occurred in Cardiff, the patient being a man who had arrived in the Tyne from Rosario and had travelled overland to Wales. The body was cremated and no fresh cases have occurred. Death took place on Oct. 4th, and as the incubation period of plague is at the outside 10 days the Customs authorities have given the port of Cardiff a clean bill of health.

PLAGUE IN SCOTLAND.

The Local Government Board for Scotland have forwarded to the various sanitary authorities in Scotland copies of three chapters of the "General Sanitary Regulations for the Prevention of the Introduction and Propagation of Plague," adopted by the Venice Convention of 1897. The three chapters deal with "Measures to be Taken in Europe," "Disinfection," and "Preventive Measures on Board Ship."—No fresh cases are reported from Glasgow.

THE MEDICAL GUILD.

THE following is the report of the Medical Guild on Hospital Reform which we have received from the honorary secretary of the Guild, Dr. Arnold W. W. Lea:—

The Medical Guild is impressed with the difficulties surrounding this question, but is convinced that reform lies along the lines indicated by the recommendations appended.

The difficulties lie chiefly in the fitness or otherwise of the various applicants who present themselves at our hospitals. The fitness must be viewed from the standpoint of professional or medical exigencies as well as from the point of view of charity.

The guild considers that the present methods of investigation through the agency of the District Provident Society, and by means of such hospital officials as are employed, are unsatisfactory because the investigation is not thorough and is limited to a small area, and also because the "poverty scale" is not the same for all the hospitals.

The guild is further of opinion that by far the greater number of those attending the out-patient department do not require any special treatment and only waste the time and energy of the hospital staff.

The guild considers that the charges exacted from patients are wrong in principle and bad in effect.

The guild is of opinion that the treatment of home patients does not come within the sphere of the legitimate work of the hospitals and could be better carried out by other means.

The guild regrets that a large amount of hospital abuse is due to medical practitioners, who, particularly in country districts, send patients to hospitals who could afford to do without medical charity.

The Medical Guild recommends:—

1. That the investigation of the financial suitability of the applicants seeking relief at all medical charities should be the work of a central board, and that, in every case in which investigation is decided upon, it should be done thoroughly.

2. That all trivial cases should be dismissed after the first attendance and that they, and all accidents (which should receive first aid), should, if not detained as in-patients and if not fit objects of charity, receive no further treatment, but be referred to other sources.

3. That all recommends should be discontinued, each application being dealt with on its own merits.

4. That the exaction of any payment whatsoever from patients should be entirely abolished.

5. That the home visiting of patients should be discontinued and more suitable arrangements made.

G. A. WRIGHT, Chairman.
WILLIAM GRAHAM, Convener.
ARNOLD W. W. LEA, Secretary.

March 29th, 1900.

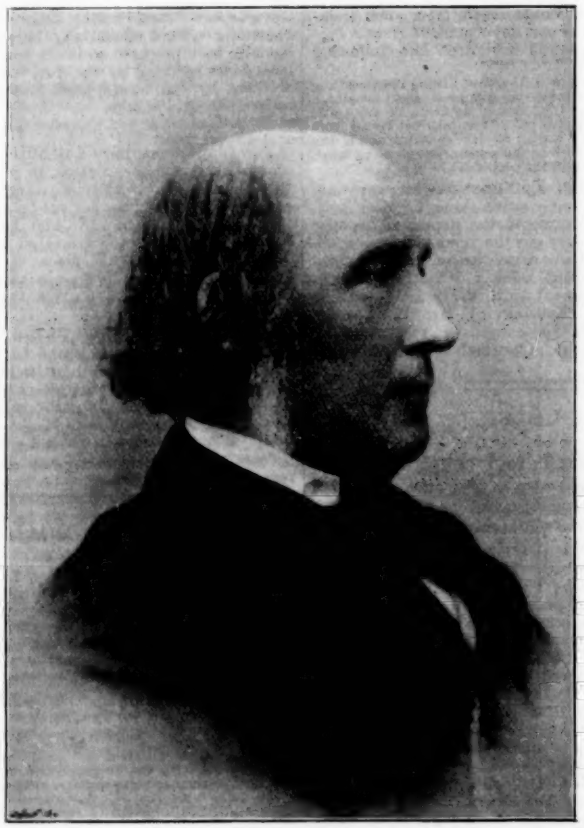
Obituary.

SIR HENRY WENTWORTH DYKE ACLAND, BART., K.C.B., M.D. OXON., F.R.C.P. LOND., F.R.S., &c.,

LATE REGIUS PROFESSOR OF MEDICINE IN THE UNIVERSITY OF OXFORD; HONORARY PHYSICIAN TO H.R.H. THE PRINCE OF WALES; AND RADCLIFFE LIBRARIAN, &C.

WE deeply regret to announce the death of Sir Henry Acland, which occurred at his residence in Oxford on the evening of Tuesday last. The distinguished physician had been in feeble health for some time and the end was not unexpected.

Henry Wentworth Dyke Acland was born on August 23rd, 1815. He came of an ancient line of Devonshire squires a mention of whom is found in the archives of the reign of Henry III., and previously to this there is no doubt that the family of Acland was, even in Saxon times, of considerable note among the notabilities of the western counties. Sir Henry Acland's father, Sir Thomas Dyke Acland, was a Member of Parliament for the county of Devon and throughout the long and distinguished history of the family there have been many instances in which Aclands have been famous in the careers that they have adopted, Sir Henry Acland's own generation and the generation junior to him supplying several examples.



SIR HENRY WENTWORTH DYKE ACLAND, BART., K.C.B., M.D. OXON., F.R.C.P. LOND., F.R.S.

Sir Henry Acland was educated at Harrow and Christ Church, Oxford. His career at Harrow was, albeit marred by somewhat poor health, signalised by several minor successes. After a few terms at Christ Church his health compelled him to take a long holiday, and a tour in the Mediterranean seemed the most beneficial to a young man in his state of health; added to this he had all a young classical scholar's ardour to visit the scenes of which he had read so much. He therefore visited the eastern shores of the Levant and set himself the task of thoroughly mapping out the site of the ancient city of Pergamos. The banks of the Simois and Scamander he explored with all the enthusiasm of a young and ambitious scholar and with care and much accurate observation made out a plan of the site of Priam's capital. This work, together with a descriptive treatise, was published at Oxford in 1839. His panoramic plan of the Plains of Troy was very highly spoken of by the more erudite journals of the day, and is still frequently consulted by classical students. This tour, a combination of labour and pleasure, being completed, he returned to Christ Church and completed his University career by taking his Bachelor's degree in 1840. Having satisfied the authorities, according to the statutes, that he was *bene natus, bene vestitus, et moderate doctus*, he was elected a Fellow of All Souls. The leisure that this appointment gave him also gave him the opportunity for devoting time to the science towards which he had always leaned, that of medicine. He proceeded to St. George's Hospital, the medical school of which institution was then adorned by Sir Benjamin Brodie, and there received, as well as the ordinary instruction given to a medical student, special tuition from Mr. Bullock, Mr. Squire, and Professor Quekett, the microscopist. During his residence in London he felt most keenly the difficulties and responsibilities of a student's life and being perhaps somewhat over-conscientious in details felt them all the more keenly. This caused him to direct his attention more especially to the general progress and status of the medical student. In 1843, being apparently tired of the then somewhat unsatisfactory life and bearing of the London student, Acland proceeded to Edinburgh, where he studied for a year or two under Dr. Alison, with whom he resided during that period. In 1844 he gained a gold medal for an essay on "Feigned Insanity," the theme having been set for a class prize in medical jurisprudence. The essay, when it was published later, received a considerable meed of favour in the profession as a thoroughly capable treatise on a little known and most complicated subject. The work was not published at once, but a small number of copies were printed for private circulation.

In 1846 he graduated in medicine in the University of Oxford, and having in the same year become a Licentiate of the Royal College of Physicians of London he devoted himself with characteristic thoroughness to the duties attached to the post of Lee's Readership in Anatomy to which in 1845 he had been appointed. Without delay he commenced the formation of the extensive collection of physiological specimens, then in Lee's Anatomical School at Christ Church, but since removed to the Oxford Museum. To this collection he devoted much hard work and it was not until 1853 that he had sufficiently collated the materials contained in this accumulation of excellent examples to publish a synopsis. In 1847 he was appointed physician to the Radcliffe Infirmary, Oxford, a post which he held for nearly 40 years and at which institution some of his most notable work was done. It is seldom that a physician is elected a Fellow of the Royal Society at so early an age as 32 years, but in 1847 Acland obtained that honour, and was in the same year made local secretary to the British Association when it met for the second time at Oxford. His work in this capacity was

marked by a thoroughness and an attention to detail which through life were Sir Henry Acland's marked qualifications.

Sir Henry Acland was always an earnest advocate of the claims of natural science as not only an item, but an essential feature, in the education of the young, and as early as 1848 he drew the attention of his university to what he considered rightly to be its duty—namely, the introduction of elementary science, physics, and the general ideas of chemistry and mechanics, as part of the necessary course in proceeding to the degree of Bachelor of Arts. His belief was that the study of the chief laws of the natural world was the most excellent channel through which the training and discipline of the human mind could be conducted, and he likewise urged that the study of the natural sciences, even in their most elementary branches, formed the very best possible mental discipline in the acquirement of true scholarship. These views were expressed by him in a most cogent manner, and so great was his influence on the conduct of study at his *alma mater* that he earned for himself the praise of Dr. Pusey, who described him as one who had devoted the prime of his life to the revival of the study of the Book of God's works. Acland's motive throughout this busy portion of his career may be briefly summarised in his own words: "To point out that the student of anatomy and physiology should make it his object to acquire above all things a knowledge of the changes, and of the causes and purposes of the changes which matter undergoes in its passage through living bodies." In this task the searcher after knowledge must trace the elements of the atmosphere and earth from their inorganic condition into those states which are capable of exhibiting the phenomena of life, and must ascertain in what order the ascent is made from the lowest living organisms to the highest and most complex. Proceeding from this basis the student must attempt to grasp the formation, nourishment, and changes of the living being itself, the forces which are engaged in maintaining the continuance of life, by what steps death is brought about, and at last the final return of the organic combinations of the inorganic elementary bodies to their former state. The idea of a "cosmos," an ordered state of all natural objects, was Acland's prevailing belief, and in the exposition of this theme he had the warmest and most enthusiastic support of his deeply attached friend John Ruskin.[1] As President of the Ashmolean Society Acland did much to popularise science in the University; and although there was during most of his long academic career at Oxford a lingering suspicion of all things scientific among certain of the guiding spirits of the oldest and most conservative educational body in England he lived to see this suspicion modified almost to the point of disappearance. In 1850 he became a Fellow of the Royal College of Physicians of London and in 1865 delivered the Harveian Oration before that body, which was afterwards published with a graceful dedication to Sir Thomas Watson, the President of the College, of whose talents and personality Acland was a sincere admirer.

In 1854 the cholera visited Oxford and the sanitary regulations of the city were placed almost entirely in the hands of Acland. Little was known of the etiology and pathology of cholera at this period, and it fell to Acland's lot to do more towards the proper understanding of the treatment and prevention of this scourge than any previous physician had done. "Many of the people of England," said he, "have yet to wake as from a dream. Though scientific men, aided by the press, have for many years striven to rouse us to a sense of insecurity, the habits of our country, the lengthy labour of discussion which is to be gone through in most public questions, and the precarious results of the votes of public assemblies, retard improvement and too often insure mischief. From this and other causes we bid fair, when cholera again appears, to be in as great danger as on either previous occasion." This warning was, as the event proved, only too necessary. The monograph from which we have quoted these lines was dedicated to Acland's old masters, Sir Benjamin Brodie and Dr. Alison of Edinburgh, with whom, especially the latter, his friendship was of the closest kind. From this time onwards the name of Acland was intimately connected with all subjects of sanitation, and more especially with the water-supply and sewage disposal of the Upper Thames valley; and in his capacity of a great sanitarian he published some valuable monographs on sewage and was one of the chief witnesses before the Select Committee appointed to inquire into the sewage of the metropolis. In 1869 he was appointed a member of the commission to inquire into the sanitary laws in England and Wales and his share in the work of that valuable body was almost preponderant, and in 1875 he was again a commissioner upon a Government inquiry in relation to sewage matters.

In 1851, on the death of Dr. Kidd, Dr. Henry Acland became Radcliffe librarian to the University and 11 years later it was by his exertions that the medical and surgical works at the Radcliffe Library were removed to their present and more appropriate quarters in the University museum. As Lee's Reader in Anatomy at Christ Church he lectured for 12 years, and when the death of Dr. Ogle, the Regius Professor of Medicine in the University, in 1857 rendered that position vacant, Dr. Acland was offered and accepted that distinguished office. His position was now such as to enable him to apply himself to the formation of the pathological collection of the museum, in which task he was greatly aided by the purchase at his instigation of the private pathological collection of Van der Kolk. To the Oxford Museum, in fact, he stood in much the same relation as did Sir Richard Owen towards the Hunterian Museum of the Royal College of Surgeons of England. The task of revivifying interest in scientific matters among the fellows of colleges was a much harder one than we can at this date conceive.

Sir Henry Acland's connexion with the General Medical Council was coeval with the founding of that body—namely, in 1858, when he was elected the Representative of the University of Oxford. In 1874 he became President of the Council, which dignity he supported with much distinction until 1887 when Sir Richard Quain was elected to the chair. His work on the Council was invaluable, and as he was likewise a member of the Medical Education Committee of the Hebdomadal Council of the University his influence on the shaping and direction of the course of studies of a medical student was very great indeed, and was invariably directed towards the enlargement of the scope of scientific training. To the production of the Pharmacopœia he contributed much valuable assistance, and throughout his connexion with the General Medical Council he devoted great energies to the advancement of the popular esteem in which members of his profession should be held. He took a very wide view of his duties and responsibilities as President of the General Medical Council. Not only did he use his influence for the good of the medical profession in his own country, but he extended his interests to foreign countries and in 1879 sent an eloquent and encouraging letter to the authorities of the Johns Hopkins University, urging his readers to higher things and to the raising of the standard of medical education. He always placed the greatest stress upon general culture as a necessary qualification for the successful medical man, and being himself of very wide interests and a thorough man of science, displayed in himself an example of the scholarly physician the parallel of which is not often seen. His great desire was to show students the way to learn and the way to express and make use of their learning in a thoroughly manly and useful manner. With regard to the fitness of women for the medical profession Sir Henry Acland held very decided views at a time when other medical men of almost or quite equal experience with him in matters of medical education were very doubtful. He stated his belief both that women could master the hard work necessary to fit them for this arduous calling and that when their studies had been completed they had every requisite gift for successful practice. He especially recommended the female medical practitioner as of incalculable service in India.

Acland's connexion with the Royal Family was long and intimate and commenced by his being appointed a member of the suite of His Royal Highness the Prince of Wales when he paid his visit to Canada and the United

[1] A passage in Ruskin's "Præterita" has immortalised a friendship which endured from undergraduate days only to be severed by death. "He [Sir Henry Acland]," writes Ruskin, "quietly showed me the manner of life of English youth of good sense, good family, and enlarged education ..... gave me the good of seeing a noble young English life in its purity, sagacity, honour, reckless daring, and happy piety; its English pride shining prettily through all, like a girl's in her beauty. ..... Both in art and science he could pull me on, being years ahead of me, yet glad of my sympathy, for till I came he was literally alone in the University in caring for either. ..... The curious point in Acland's character was its early completeness. Already in these yet boyish days his judgment was unerring, his aims determined, his powers developed; and had he not, as time went on, been bound to the routine of professional work and satisfied in the serenity, not to say arrested by the interests, of a beautiful home life, it is no use thinking or saying what he might have been; those who know him best are the most thankful that he is what he is."

States in 1860. On returning to Oxford he was appointed honorary physician to His Royal Highness who entered the University in that year. In the same year he received the honorary degree of LL.D. from the University of Cambridge and was made an honorary student of Christ Church. In 1867 Dr. Acland was appointed by Government a member of the Cubic Space Committee, the reference of which was the state of the metropolitan workhouses as regards the space and area required for each pauper in the dormitories and in the wards of infirmaries.

Sir Henry Acland's literary works are both numerous and inclusive of a remarkable range of subjects, embracing not only themes intimately allied to medicine and pathology but several valuable contributions to general literature. To his first work on the "Plains of Troy," published in 1839, we have alluded above and among his other works perhaps the most notable is the useful volume on "National Health" written in 1871 at the desire of the President and Council of the Royal College of Surgeons of England. This work deals exhaustively with the essentials of public health as then understood with regard to environment, food, and water. "Village Health and Village Life" was written in 1884 for the International Health Exhibition and is characterised, as indeed are all his writings, by an ease and elegance of diction attained to only by a finished scholar. His Harveian Oration in 1865 was a very notable piece of philosophical work. It was the first of these orations delivered in English and indeed no fitter man than Acland could have been found to demonstrate that dignity and eloquence can be every whit as well blended through the medium of the English tongue as through that of the more sonorous Latin. He reviewed the opinions of the various philosophers who have discussed with greater or less exactness the doctrine of final causes and made an able refutation of Comte's arguments against design. His position was briefly and eloquently summed up in the following words: "No student of nature worthy of the name looks on the problem of this world as other than vast and inexplicable. He pretends no more than to see as by an image, darkly, and to bend before the Cause of all." Of his beautiful work on the "Oxford Museum," which he wrote in collaboration with his friend John Ruskin, several editions have appeared between the date of its first appearance in 1859 and 1893, when it was considerably enlarged and produced in sumptuous form with admirable illustrations. The last edition includes a photograph by Miss Acland of Sir Henry Acland and Ruskin taken in the garden at Brantwood in August, 1893. The two friends are seated in garden-chairs and are represented as in close commune over a book of prints or plans. Another of his works which calls for attention is his graceful and appreciative biography of his old friend and master, Sir Benjamin Brodie.

Sir Henry Acland was one of the few members of our profession not connected with the naval or military services who have received the honour of a Companionship of the Bath. To this honour he was admitted in 1883 in recognition of his services to the profession and to the cause of medicine and public health, and in the following year he was raised to the rank of Knight Companion of the Order. In 1890 he received the honour of a baronetcy of the United Kingdom, and it was acknowledged on all sides that few men had greater claims to the distinction either in the University of Oxford or in the medical calling at large. Among the numerous honours enjoyed by Sir Henry Acland were the Doctor of Laws degree of Cambridge and of Dublin, the degree of Doctor of Civil Law of the University of Durham, and likewise the titles of Doctor of Medicine of Trinity College, Dublin, Fellow of the Royal Society, member of the medical and philosophical societies of Philadelphia, Christiania, Athens, New York, and Massachusetts, and of an almost countless array of medical and scientific societies throughout England, Europe, and America. He was a Knight of the Rose of Brazil, which order was conferred on him in recognition of his great services to science in the matter of the cholera investigations to which we have before alluded.

Sir Henry Acland's stately and venerable figure will be greatly missed in the streets and quadrangles of Oxford, where he was deservedly one of the best known and most highly respected personages of the University, and beyond the respect in which all who had the honour of his acquaintance held him he was deeply beloved by many who owe much to his kindly sympathy and genial encouragement. Many generations of medical graduates of the University will remember his uniform courtesy to them and his power of setting at their ease young and undistinguished members of the University with whom he was brought in contact. On the morning of a degree day he was in the habit of asking those whom he was about to present for a degree in medicine to breakfast with him at his delightful old house in Broad-street. Before breakfast prayers were read by him, the book used being solemnly brought in upon a flat fire-stained stone. (This stone, by the way, was dug up during some excavations in Broad-street necessitated by the erection of the new front of Balliol College and was supposed to have been one of the stones surrounding the stake at which Ridley and Latimer suffered the penalty of burning.) Breakfast followed, a meal hardly to be forgotten by his guests for the varied and interesting talk of the host. It was on this and similar occasions that he showed himself a type of a fashion of man now almost completely passed away. Courtesy and scholarship still abound, but the old-world setting of these virtues, so beautifully indicated in Ruskin's tribute to his friend, has somewhat ceased to be. In 1846 he married Sarah, daughter of the late William Cotton, F.R.S., a philanthropist who devoted so much of his wealth and energies to the advancement of the cause of the Church of England in the East End of London. This lady, who died in 1878, brought her husband a family of six sons and one daughter. Sir Henry Acland is succeeded in the baronetcy by his son, Rear-Admiral William Alison Dyke Acland, R.N., a naval aide-de-camp to Her Majesty the Queen. One son—viz., Dr. Theodore Dyke Acland—follows his father's profession of medicine.

SAMUEL HENRY SWAYNE, M.R.C.S. ENG., L.S.A.

MR. SAMUEL HENRY SWAYNE, who died at his residence in Pembroke-road, Clifton, on Oct. 12th, in his eightieth year, was a member of an old Gloucestershire family, his grandfather being vicar of Pucklechurch and his father having practised as a surgeon in Bristol. Mr. Swayne received his medical education at the Bristol Medical School and St. Bartholomew's Hospital and qualified as M.R.C.S. Eng., and L.S.A. in 1843 and 1844 respectively. Shortly afterwards he commenced practice in Clifton, and he continued to follow his professional duties until three months ago, when he was laid aside by cardiac trouble. Mr. Swayne was delicate from childhood and was always obliged to take care of his health. He was an ex-president of the Bristol Medico-Chirurgical Society and the Bristol Naturalists' Society, a vice-president of the Bristol and Gloucester Archæological Society, and honorary secretary of the Bristol Museum. He took a great interest in Church matters and was associated with his brother, Dr. Joseph Griffiths Swayne, in the building of All Saints' Church, Clifton. Mr. Swayne lost his wife 30 years ago and leaves no children. He is survived by three of his brothers, one of whom, Dr. J. G. Swayne, is the consulting obstetric physician to the Bristol General Hospital.

RICHARD HAMILTON COWAN, M.R.C.S. ENG., L.S.A.

THE medical profession in Wigan has received a severe blow through the unexpected death of Mr. Cowan which took place on Oct. 6th after a very short illness. Mr. Cowan, who was only 42 years of age, was apparently in his usual health on Oct. 2nd, but on the following morning he was seized with a rigor; he nevertheless went to the house of a midwifery patient who had sent for him, but was soon compelled to hand over the case to a brother practitioner and to return home to bed. Symptoms of pneumonia were then recognised by his medical friends who were called in, but all their endeavours to check the progress of the disease were unfortunately unavailing. The deceased was the son of Mr. Richard Hamilton Cowan, R.N., of Southsea. He entered as a student at the London Hospital in 1877 and in 1881 he became qualified as M.R.C.S. Eng. and L.S.A., after which he held the position of assistant medical officer in Birmingham Workhouse Infirmary, and in 1883 he went to Wigan. Two years later he entered into partnership with Mr. C. D. Shepherd of that town, and in 1897 he succeeded to the whole of the practice. Kind, genial, and sympathetic, he was beloved by his patients and held in the greatest esteem by his colleagues. In 1892 he was elected an honorary medical

officer of the Royal Albert Edward Infirmary and devoted his energies to the interests of that institution unsparingly; he was particularly interested in abdominal surgery and was very successful in that department of his work. At the time of his death he was president of the Wigan Medical Society and had formerly been president of the local chess club. Mr. Cowan has left a widow and three children. The funeral took place at Standish on Oct. 10th and was largely attended, the infirmary board of management and several public bodies being represented.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Max Schaeffer, a well-known Bremen laryngologist, at the age of 55 years, by an Alpine accident. —Dr. Abraham Kuhn, Professor of Otology in the University of Strasburg, at the age of 62 years. He was a very skilful operator and had published numerous researches on the comparative anatomy of the ear. — Dr. Alex. Zarewicz, Lecturer on Skin Diseases in the University of Cracow.— Dr. Jacob M. Da Costa, a well-known Philadelphia physician.—Dr. A. W. Griggs, formerly Professor of Medicine at the Atlanta Medical College.—Dr. E. Albert, Professor of Clinical Surgery in Vienna.—Dr. Rudolf Arndt, Extraordinary Professor of Mental Diseases and Director of the University Clinic in Greifswald, at the age of 55 years. He published a text-book and many monographs on psychiatric subjects. Recently he wrote some papers of a philosophical and biological character taking up a somewhat peculiar position.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6578 births and 3799 deaths were registered during the week ending Oct. 13th. The annual rate of mortality in these towns, which had been 18·5 and 17·8 per 1000 in the two preceding weeks, further declined last week to 17·1. In London the death-rate was 14·8 per 1000, while it averaged 18·5 in the 32 provincial towns. The lowest death-rates in these towns were 10·5 in Cardiff, 11·9 in Croydon, 12·6 in West Ham and in Leicester, and 13·0 in Bolton; the highest rates were 23·1 in Liverpool, 23 8 in Gateshead, and 24·8 in Manchester and in Salford. The 3799 deaths in these towns included 563 which were referred to the principal zymotic diseases, against 776 and 673 in the two preceding weeks; of these 289 resulted from diarrhœa, 85 from diphtheria, 64 from "fever" (principally enteric), 59 from whooping-cough, 39 from measles, and 27 from scarlet fever. The lowest death-rates last week from these diseases occurred in Cardiff, Halifax, Bradford, and Newcastle; and the highest rates in Wolverhampton, Leicester, Salford, and Gateshead. The greatest mortality from measles occurred in Swansea; from whooping-cough in Derby and Gateshead; from "fever" in Plymouth, Wolverhampton, and Sunderland; and from diarrhœa in Wolverhampton, Manchester, Burnley, and Gateshead. The mortality from scarlet fever showed no marked excess in any of the large towns. The 85 deaths from diphtheria included 26 in London, 11 in Leicester, seven in Leeds, and seven in West Ham. No fatal case of small-pox was registered last week in any of the 33 large towns; and only one small-pox patient was under treatment in the Metropolitan Asylums Hospitals on Saturday last, Oct. 13th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 2187, against numbers increasing from 1703 to 2071 on the six preceding Saturdays; 322 new cases were admitted during the week, against 269, 318, and 313 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 203 to 164 in the three preceding weeks, rose again last week to 173, but were 74 below the corrected average. The causes of 33, or 0·9 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Nottingham, Leeds, Hull, Newcastle, and 13 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, and Manchester.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·9 and 19·3 per 1000 in the two preceding weeks, declined again to 18·0 during the week ending Oct. 13th, and was 0·2 per 1000 above the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 14·5 in Edinburgh and 14·6 in Leith to 19·7 in Aberdeen and 21·1 in Dundee. The 556 deaths in these towns included 36 which were referred to diarrhœa, 13 to whooping-cough, seven to scarlet fever, seven to diphtheria, five to "fever" (including one death from plague), four to measles, and two to small-pox. In all, 74 deaths resulted from these principal zymotic diseases, against 91 and 107 in the two preceding weeks. These 74 deaths were equal to an annual rate of 2 4 per 1000, which was 0·1 per 1000 below the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of diarrhœa, which had been 49 and 52 in the two preceding weeks, declined again last week to 36, of which 17 occurred in Glasgow, seven in Dundee, four in Paisley, and three in Leith. The deaths from whooping-cough, which had been 12 and 18 in the two preceding weeks, declined again to 13 last week, and included 10 in Glasgow and two in Greenock. The fatal cases of diphtheria, which had declined from 11 to five in the three preceding weeks, rose again last week to seven, of which four were registered in Glasgow and two in Dundee. The seven deaths from scarlet fever corresponded with the number in the preceding week, and included five in Glasgow. The deaths referred to different forms of "fever," which had increased from four to 13 in the five preceding weeks, declined again last week to five and were all recorded in Glasgow, where the two fatal cases of small-pox were also registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 101, 100, and 98 in the three preceding weeks, rose again last week to 104, and were slightly above the number in the corresponding period of last year. The causes of 22, or nearly 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·5 and 26·0 per 1000 in the two preceding weeks, further rose to 26·4 during the week ending Oct. 13th. During the past four weeks the death-rate in the city has averaged 25·4 per 1000, the rate during the same period being 16·0 in London and 17·6 in Edinburgh. The 177 deaths belonging to Dublin registered last week were three in excess of the number in the preceding week, and included 21 which were referred to the principal zymotic diseases, against 25 and 36 in the two preceding weeks; of these 15 resulted from diarrhœa, four from "fever," one from whooping-cough, and one from diphtheria. These 21 deaths were equal to an annual rate of 3·1 per 1000, the zymotic death-rate during the same period being 1·9 in London and 1·0 in Edinburgh. The fatal cases of diarrhœa, which had 18 and 27 in the two preceding weeks, declined again last week to 15. The deaths referred to different forms of "fever," which had been four and three in the two preceding weeks, rose again to four last week. The fatal cases of whooping-cough, which had been three, three, and five in the three preceding weeks, declined again last week to one. The 177 deaths in Dublin last week included 45 of infants under one year of age and 41 of persons aged upwards of 60 years; the deaths of infants showed a marked decline while those of elderly persons exceeded the number in the preceding week. Seven inquest cases and five deaths from violence were registered, and 56, or nearly one-third, of the deaths occurred in public institutions. The causes of 17, or nearly 10 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

INSPECTOR-GENERAL of Hospitals and Fleets H. C. Woods, M.V.O., is appointed to the *Victoria and Albert*, reappointed on promotion.

The following appointments are notified:—Surgeons: R. L. Dickinson to the *Hussar* and W. P. Walker to the *Majestic*.

ROYAL ARMY MEDICAL CORPS.

Captain Watson is granted the temporary rank of Major whilst employed in South Africa. Temporary Captain J. K. Butter resigns his commission.

Surgeon-Major D. Elcum, I.M.S., retired, has been appointed for duty in the Home District. Lieutenant G. Baillie arrived at Chatham on Oct. 4th for duty. Lieutenant B. B. Burke arrived at Colchester on Oct. 3rd for duty. Lieutenant L. L. G. Thorpe arrived at Dover for duty on Oct. 3rd, and has been posted to the Station Hospital, Western Heights. Lieutenant-Colonel R. Blood officiates as District Principal Medical Officer, Bombay Command, pending the appointment of a successor to Colonel Maunsell, retired.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain J. K. Butter resigns his commission.

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion the South Staffordshire Regiment: Surgeon-Captain J. K. Butter resigns his commission. 1st (Pembrokeshire) Volunteer Battalion the Welsh Regiment: Horace Lake Lowis to be Surgeon-Lieutenant. 2nd Volunteer Battalion the York and Lancaster Regiment: Surgeon-Lieutenant H. H. B. Wilkinson retires under paragraph 111 Volunteer Regulations, and is granted the rank of Surgeon-Captain, with permission to wear the uniform of the battalion on retirement.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Lieutenant-Colonel R. N. Campbell, I.M.S., Civil Surgeon, on return from furlough, are replaced at the disposal of the Government of India in the Home Department. Lieutenant-Colonel J. W. U. Macnamara, I.M.S., Civil Surgeon, on return from furlough, is posted to Tezpur and appointed to hold civil medical charge of the Darrang district. Captain A. Leventon, Officiating Civil Surgeon, Darrang, on being relieved by Lieutenant-Colonel J. W. U. Macnamara, is transferred to Sibsager and appointed to hold civil medical charge of that district until further orders. Major E. R. W. C. Carroll, I.M.S., Civil Surgeon, on return from furlough, is posted to Dhubri, and appointed to hold civil medical charge of the Goalpara district. Major E. C. Hare, I.M.S, Civil Surgeon, on return from furlough, is posted to Gauhati and appointed to hold civil medical charge of the Kamrup district. Captain H. C. French, R.A.M.C., has been transferred from the Mhow district to the Nagpore district, and Captain W. Tibbits, R.A.M.C., from the Nagpore district to the Mhow district.

TRANSVAAL WAR NOTES.

Most of the members of the Scottish National Hospital have arrived in England.

Professor Alfred W. Hughes, Mr. J. Lynn Thomas, Dr. E. Laming Evans, and Mr. Mills-Roberts of the Welsh Hospital are returning to England in the *Saxon*. They are expected to arrive at the end of the present week. Before their departure from Pretoria Surgeon-General W. D. Wilson, principal medical officer of the Army in South Africa, wrote to Professor Hughes as follows: "I must now thank you and your staff for your great help. You have worked loyally with us, and I believe all the Royal Army Medical Corps in South Africa have a warm place in their hearts for you, and they fully appreciate the cordial assistance you have given us." The nurses and orderlies are still at Pretoria.

Captain F. J. Wade-Brown, R.A.M.C., and Civil Surgeon C. R. Martin have been discharged from hospital for duty.

THE WAR IN CHINA.

It is quite clear that the international forces in China have an uncommonly troublesome task before them. This does not arise so much from any difficulty in overcoming the forces opposed to them, although these must be considerable where there are any number of Chinese to take the place of those slain or defeated in battle, and where human life is held to be of little value, as from the fact that military success makes no impression upon the Imperial Court and those in authority in China, located as they are in distant and inaccessible positions. It is like the case of the Irish landlord who said that if his tenantry thought to intimidate *him* by murdering his agents they were much mistaken. The Chinese puzzle consists in the fact that there is no constituted authority to dictate terms to and no reliance to be placed upon Chinese decrees and orders which are probably wholly insincere and only issued to gain time. Meanwhile the British contingent sent from India has already done excellent service. It is apparently amply supplied by the Government of India with hospitals and hospital ships and medical stores. The Maharajah Scindia has been most patriotic and generous in providing at his own expense a splendid hospital ship for the expedition. It is reported that dysentery has been very prevalent of late among the troops at, and in the vicinity of, Tien-Tsin.

WEST AFRICAN FRONTIER FORCE.

In THE LANCET of March 31st, 1900 (p. 952) some account was given of the general medical history of this force up to March 31st, 1899. A report on the health of the British troops serving with this force for the year ending Dec. 31st, 1899, has been drawn up by Mr. D. K. McDowell, the acting principal medical officer, and has been recently published by the Colonial Office. The statistical summary with which the report closes is as follows: "Average annual strength, 151; percentage of admissions, 326·5; average daily sick; 6·22; admissions for fever, 377; average duration of fever, 5·58 days; percentage of deaths from fever, 5·3; percentage of deaths from all diseases, 9·2." The 377 admissions for fever just mentioned consisted of 354 cases of malarial fever (with five deaths), and 23 cases of blackwater fever (with three deaths). The total deaths during the year were 14, consisting of the eight just mentioned, and in addition one each from dysentery, heat apoplexy, heatstroke, enteritis, ptomaine poisoning, and abscess of the liver. 37 men were invalided to England. The general health of the force was therefore anything but good.

THE ASHANTI RISING.

Good progress is being made in the war on the west coast of Africa in suppressing the rising of the Ashantis and other turbulent tribes. It is generally believed that notwithstanding the anticipation of some further fighting on the part of some of them the majority of those opposed to us will soon surrender. Major Holford's column which left Kumasi to open communication with Kintampo has returned. The column suffered severely during the rains and the health of the troops was unsatisfactory owing to their hard and fatiguing work and exposure. Although there is a good deal of the usual diseases incidental to field service in such a climate at this season, still the amount of sickness has not been anything like what it would have been among European troops under similar circumstances.

THE NAVAL VICTUALLING COMMITTEE.

The Admiralty Victualling Committee, which has been sitting at Devonport during the past week under the presidency of Vice-Admiral Rice, has now gone to Portsmouth to continue its inquiries. At Devonport several officers and men were examined, and in addition to making inquiries with the object of improving the victualling of the navy the committee are collecting information and suggestions with a view to the adoption of a reform in canteens on Her Majesty's ships. The committee consists of six members, including Deputy Inspector-General of Hospitals G. J. Irvine.

ORDER OF THE BRILLIANT STAR OF ZANZIBAR.

The Queen has given to Captain Patrick Percy Kilkelly, I.M.S., Her Majesty's Royal licence and authority to accept and wear the Insignia of the Fourth Class of the Order of the Brilliant Star of Zanzibar, conferred upon him by His Highness the Sultan of Zanzibar.

LEAN'S ROYAL NAVY LIST.

The ninety-second quarterly issue of this most useful compilation, now in its twenty-third year, has just been published by Messrs. Witherby and Co., 326, High Holborn, and 4, Newman's-court, Cornhill. No better arranged reference book to the Royal Navy could be desired.

A correspondent of the *Army and Navy Gazette* writes from South Africa:—"The foreign attachés when they came back to Cape Town were loud in praise of Lord Roberts and his methods, and on leaving the Cape united in drawing up an address expressing cordial gratitude to his lordship for his proverbial courtesy. Every attaché signed his name and added an expression of appreciation of the consideration he had received. As one of the officers remarked to me: 'It has been a revelation to see on all hands so much kindly feeling—not forced, but real thoughtfulness and soldierly generosity. I do not exaggerate in the least; I mean what I say. We have been made very

happy, and I for one shall not forget how good-tempered and free from all bitterness towards your enemies your soldiers and officers have been.'"

Surgeon Edward Thomas Meagher, R.N., invalided from the cruiser *Scout*, and Staff Surgeon Jeremiah Sugrue, R.N., invalided from the battleship *Devastation*, landed at Plymouth on Oct. 6th.

Lieutenant-Colonel P. F. O'Connor, I.M.S., has been appointed principal medical officer to the troops at Shanghai.

Correspondence.

"Audi alteram partem."

MEDICAL SERVICE IN THE HIGHLANDS AND ISLANDS OF SCOTLAND.

To the Editors of THE LANCET.

SIRS,—To meet the undoubted hardships of certain Poor-law medical officers in Scotland, the first remedy is to put the Scottish Poor-law Medical Grant on the same footing as it stands in England and Ireland—that is, that Scotland should get one-half of the actual expenditure instead of a fixed contribution which is less than that moiety. The second, that the Poor-law medical officers should not be dismissed unless with the sanction of the Local Government Board for Scotland. The third, that manses for the doctors should be provided in the remote districts of the Highlands and islands. The fourth, that they should have the right to be superannuated on a fair scale, founded on proper principles. The fifth, that they be entitled to an annual holiday, the parish council giving a fair allowance for providing a substitute.

The first of these points is really a ratepayers' question, and there can only be one answer if Scotland is to get equal justice when compared with other parts of the United Kingdom. Against the second proposal there are certain objections which are more or less valid, and it would be very difficult, unless the Government take full charge of a Bill to alter the present status of the medical officers, to get it passed, seeing that most of the parish councils would naturally be opposed to any such restriction. If this be so, then some other method must be thought of. The hardship scarcely applies in any cases except in those where the subsidy is really given not merely for attendance on paupers but as a guarantee for securing the services of the local doctor. The result of this arrangement is that if the doctor loses his parochial appointment he is really deprived of his means of living and must abandon the struggle.

Seeing that the public at large really helps to pay for medical attendance to all and sundry in these parishes, it ought in all fairness to have its say, both in making and unmaking such appointments. A precedent is fortunately at hand in the case of the schools in certain island parishes where, in the case of extraordinary grants, H.M. inspector of schools acquires a right to sit at the school board. If the Local Government inspecting officer had the same right, then he would see to it that no injustice was done to the parish doctor, and would likewise take care that only competent men were appointed and that proved incompetent men were dismissed.

With regard to the third point, all that is wanted is that permissive power be given the parish councils for such purposes to borrow money to be repaid on the same terms as similar loans granted to local authorities. It is not necessary to argue in favour of some form of superannuation, or as to giving permissive powers to parish councils to grant holidays to their medical officers. Seeing that these are already given in Ireland, surely Scotch Poor-law medical officers are entitled to the same privilege, a privilege which on every ground is likely to be for the good, not only of the doctor, but also of his patients.

I am, Sirs, yours faithfully,

WILLIAM BRUCE, M.D. King's Coll., Aberd.,
Direct Representative for Scotland on the General Medical Council.

Oct. 16th.

A SUGGESTION FOR THE EXTERMINATION OF THE MOSQUITO FROM COLONIAL HOSPITALS AND DWELLINGS.

To the Editors of THE LANCET.

SIRS,—It behoves all who are interested in the relation of the mosquito to malaria to offer any suggestion which may be of service to the residents in malaria-stricken districts. I have no personal knowledge of the mosquito or his habitat, but I should like to tell a story which in the hands of those acquainted with both may perchance prove of value. As I have always four or five horses in my stables I built a large corn-loft, on the most approved principles to keep out vermin, to enable me to buy in the cheapest market by purchasing 50 quarters of oats at a time. Many years ago I found my horses were not up to the mark, and on inquiry ascertained that they refused their corn. I immediately went into my corn-loft and discovered that many bushels of oats were simply husks, the corn having been consumed by the ravages of moths. This was such a new experience to me that it required some consideration to cope with it in the future. As the mischief was all done for that season I removed the destroyed corn, and when the remainder was consumed I had the walls and ceiling washed with fresh slaked lime, so that it was put on hot, into which was stirred sufficient sulphur to make it somewhat yellow. This is renewed every few years and causes no unpleasant smell. But into the precincts of my corn-loft no moth or fly ever dares to enter. Would this plan similarly affect the mosquito is the suggestion I would offer for what it is worth?

I am, Sirs, your obedient servant,

Rugby, Oct. 15th, 1900. CLEMENT DUKES.

THE INCUBATION PERIOD OF MALARIA.

To the Editors of THE LANCET.

SIRS,—The following case may be of value in settling the incubation period of malaria.

A man, aged 32 years, left Grandola in Spain on July 25th, 1900, in the afternoon. He arrived at Alcacer do Sal at 8 o'clock in the evening and left again on the top of a diligence for Poicerão at 10.30, which he reached at 4 A.M. to catch the 4.20 train. Alcacer do Sal has a very bad reputation for malaria; it is a salt swamp and mosquitoes abound. From 8 P.M. on July 25th to 4.20 A.M. on July 26th my patient was badly bitten by mosquitoes, and this is the only occasion on which he has been in a malarious district. On arriving at Southampton about 10 P.M. on August 12th he did not feel very well; he remained on the boat and left by the morning train for London on August 13th. About 4 P.M. that afternoon he began to feel very ill and could hardly walk and at 8 o'clock, while trying to have some dinner, a definite attack came on. This was at once recognised by a friend who had been many years in China as ague. The patient had a very bad night but was comparatively well next day. A second attack came on about 8 o'clock on August 16th and as my patient became slightly delirious and was very feverish a medical man was hastily summoned. The blood was unfortunately not examined and the patient since then has had several much milder but irregular attacks. The incubation period, therefore, in this instance seems to have been 18 days—from the night of July 25th–26th to the evening of August 13th.

I am, Sirs, yours faithfully,

W. FRANK COLCLOUGH,
Medical Officer to the British Hospital, Oporto.

Oporto, Portugal, Oct. 9th, 1900.

THE ORANGE RIVER COLONY AS A HEALTH RESORT.

To the Editors of THE LANCET.

SIRS,—Now that winter is approaching and the profession and public alike are once more turning their attention to South Africa as a health resort, I venture to opine that first-hand information from those who have been there may not be unacceptable to those who propose to go. My own experience is limited to the Harrismith district of what was the Orange Free State, about which I will say no more than that it is second to none in point of suitability for cases of threatened or early tuberculosis. My object in writing is

not to advocate this above any other locality, but to make known the existence, about 10 miles from the town of Harrismith, of what is a considerable rarity upon the high veldt—a large and comfortable farmhouse where paying guests are welcome. Of this house and its hospitality I had in the early part of last year two months' personal and happy experience; and I have lately heard that the host and his wife, both loyal English Afrikanders, have survived the dangers and hardships of the war and are once more in a position to do their best for a limited number of visitors. It would give me pleasure to impart to anyone, medical or lay, all that I know about this house and its surroundings.

I am, Sirs, yours faithfully,

W. LEE DICKINSON.

9, Chesterfield-street, Mayfair, W., Oct. 12th, 1900.

THE CAUSATION OF SCURVY.

To the Editors of THE LANCET.

SIRS,—Being much interested in scurvy I read with great expectation the article by Dr. Vaughan Harley and Mr. F. G. Jackson in THE LANCET of April 28th, 1900, p. 1184, and that by Staff Surgeon W. E. Home, R.N., in THE LANCET of August 4th, p. 321, and I regret to say that I am disappointed, for the following reasons.

Dr. Harley, as the result of feeding monkeys with bad meat, came to the conclusion that scurvy is caused by some poison in tainted (flesh) food. Now this may or may not be correct, but it quite fails to account for the disease in men who only eat good grain stuffs. I have seen a good deal of scurvy amongst non-meat-eating Indian troops both on service and in peace time, and have always found it to be caused solely by a diet containing too little fresh vegetables or fruits. I am of opinion that the disease was so caused as it was always cured by the addition to the diet of fresh potatoes, or dates, or limes, without any change being made in the food and water the patients were originally taking, without change of locality or circumstances, and without drugs. I am unable to give an opinion as to the prophylactic or curative powers of tinned milk, of pressed vegetables, of onions, of preserved limejuice, of fresh meat, or of fresh milk, though a recent experience of mine seemed to show that those men who could afford to buy milk were not attacked, while others under exactly the same conditions, but without milk, were attacked, and as regards fresh meat Nansen has proved that a diet of that alone is quite sufficient.

Staff-Surgeon Home suggests that scurvy is "an infection of the mouth with micro-organisms out of decayed food." I do not think that this is so, as in large outbreaks I have seen amongst non-meat-eating men, the various grains which formed the food staples were excellent, and the affection of the gums was not the first symptom observed. Also the gums are not in a state of inflammation—gingivitis. At a certain stage of the disease—generally early, very occasionally late, and I have read sometimes not at all—they become swelled by the scorbutic fibrinous infiltration (except places where teeth are absent), and any ulceration which may supervene later is quite unspecific. With reference to the "orthodox view" given by Staff Surgeon Home let me give a typical case. A healthy sepoy, living in cantonments, wishes to save money. He has to pay for and eat the flour, rice, or dhal cooked by his company cook, so he saves by depriving himself of extras such as milk and vegetables, and meat if a meat-eater. In two or three months that man will be in hospital with scurvy, and in a fairly short time he will, by the simple addition of fresh limes or potatoes to his original diet, be quite fit for duty. "Preceding hardships" are not required for the production of scurvy, and I think it a good working rule to fear that men will become scorbutic if they cannot get either green vegetables, or fruit, or fresh milk, or fresh meat.

I am, Sirs, yours faithfully,

C. B. MAITLAND, F.R.C.P. Edin.,
Lieutenant-Colonel I.M.S.

Grantown-on-Spey.

"TWO CASES OF ARTERIO-VENOUS ANEURYSM."

To the Editors of THE LANCET.

SIRS,—I am much interested in the two cases of arterio-venous aneurysm reported in THE LANCET of Oct. 13th, (p. 1073) by Lieutenant-Colonel J. T. Lewtas, I.M.S. The result of the first case, treated by ligature of the vein by means of two ligatures applied one above and one below the opening into it and by ligature of the artery above the opening into it, is eminently satisfactory, for the disease was cured and the limb was saved. The result of the second case is, I should consider, eminently unsatisfactory, for the limb was amputated. I have on one occasion tied the artery above the opening into it for the cure of arterio-venous aneurysm of the popliteal artery and vein with the same unfortunate result as that following Colonel Lewtas's operation and it is curious how frequently gangrene has followed this procedure. Gangrene is much more common in cases of femoral arterio-venous aneurysm after ligature of the artery by a single ligature applied to the vessel above the opening into it than when a ligature is applied above the aneurysm for the cure of popliteal aneurysm (Hunter's operation). I do not know that this is to be wondered at, but it is certainly true. On the other hand, tying both artery and vein above and below the opening into them and dissecting out the sac has been attended by most satisfactory results. This is undoubtedly a severe and sometimes a difficult operation, but it can usually be performed. In one case reported by Dr. Keen where the common carotid and the jugular veins were involved it was found impossible to dissect out the sac, but even this case was cured.—I am, Sirs, yours faithfully,

FREDERICK PAGE,
Professor of Surgery, Durham University.

Newcastle-upon-Tyne, Oct. 15th, 1900.

"THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY AND THE GENERAL MEDICAL COUNCIL."

To the Editors of THE LANCET.

SIRS,—In reply to Mr. T. Bryant's letter, dated May 5th, published in THE LANCET of Oct. 13th (p. 1097), I beg leave to say that I still regard as accurate the statement contained in the second paragraph of that letter. The paragraph is printed between inverted commas and is quoted from the last annual report of my society. I know no reason why anyone should accept as convincing Mr. Bryant's expression of his personal opinion concerning the cases to which he refers; and I see nothing more in his letter than a mere expression of his personal opinion.

I am, Sirs, yours faithfully,

HUGH WOODS,
Honorary General Secretary.

Oct. 15th, 1900.

"THE SMOKE NUISANCE."

To the Editors of THE LANCET.

SIRS,—In answer to the letter from Mr. F. W. Alexander on the above subject which appeared in THE LANCET of Oct. 13th, (p. 1098) I should like to point out that the coal Smoke Abatement Society is well aware that it or any individual may prosecute in a case of smoke nuisance, but that having considered the matter in all its bearings the committee of the society has determined, at any rate for the present, not to institute proceedings itself. The principal difficulty in the society instituting proceedings is that the society would have to prove in court a nuisance by the smoke, a not always easy thing to prove to the satisfaction of a magistrate, whereas if the vestry prosecutes it only has to prove that black smoke was emitted, which under Section 23 and 24 constitutes a nuisance. Where there are public authorities constituted for the purpose of suppressing these nuisances my committee considered that it would be unwise of them to commence legal proceedings in cases which now number some thousands.—I am, Sirs, yours faithfully,

H. A. DES VŒUX,
Hon. Treasurer, Coal Smoke Abatement Society.

Oct. 17th, 1900.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Medical Staff for the China Expeditionary Force.—The Hospital Ship Orontes.—Beri-beri on H.M.S. Sphinx.—The Pasteur Institute at Kasauli.—Further Increase of Plague in India.

ONE hundred and thirty medical officers (all but eight of whom belong to the Indian Medical Service) having been detailed for duty with the China Expeditionary Force there

has been a great strain on the medical service. Many officers (87) have been taken from civil employment and others holding civil stations have been given charge of native troops in addition to their own duties. Besides this the Government have found it necessary to engage the services of purely civilian and unofficial practitioners.

The hospital ship *Gwalior* which has been provided by the Maharajah Scindhia is to sail on Sept. 22nd. She is one of the boats of the British India line. Extensive and costly alterations have been made. She was first carefully surveyed in the dry dock and was then dressed in a coat of light-grey paint with red crosses on her bows, sides, stern, and funnel. She is now lighted throughout by electricity and she has electric fans. There will be separate accommodation for convalescents and a completely isolated infectious ward on the poop. A simple and efficacious method of taking the sick on board has been fitted by means of a large port in the ship's side with a conveyance by a light trolly to the beds. For fracture and certain surgical cases swinging beds have been provided. Electric stoves have been furnished and with these water can be boiled in a few minutes. The *Gwalior* has been fitted not only with all the necessary apparatus of ventilation for use in a tropical climate but with all the necessary warming arrangements to cope with the severe winter months of Northern China. The vessel is a three-masted steamer of 4200 tons register and she closely resembles the hospital ship *Carthage*. There will thus be, including the *Maine*, three vessels in Chinese waters, so that with the three base hospitals the sick and wounded should be well provided for. The expenses of the *Gwalior* will probably exceed £100,000 and she will have to be restored to her owners in her original condition.

Five cases of beri-beri have occurred amongst the bluejackets on board H.M.S. *Sphinx*, which left Muscat on Sept. 13th and arrived in Bombay on the 17th. The vessel has been placed in quarantine and has been thoroughly disinfected and the patients have been removed to hospital.

In consequence of the artificially-induced opposition to the Pasteur Institute at Kasauli it is advisable to record the success which has attended the institution since its opening on August 9th. There have now been 42 admissions, and 31 patients have completed the course of treatment. During the past week a British soldier and two native civilians were admitted, while four officers from Bombay, a British soldier, and two native civilians are on the way. The native patients include both Mohamedans and Hindoos, and all appear only too anxious to avail themselves of the treatment.

While plague is again on the increase the numbers under famine relief are rapidly diminishing. The total figures have decreased by nearly half a million during the week and at present there remain one and a quarter millions on relief works and two and a half millions on gratuitous relief. This week's plague returns show a further increase, the total deaths throughout India having risen to 1136. Bombay city returns 72, Bombay districts 593, Calcutta 81 (including suspected), and Bengal districts 22. In the Mysore State the deaths numbered 363. There are now indications that the disease is again developing in Bombay city, the general mortality (1084, equal to 66·44 per mille) not only remaining very high, but the recorded deaths from plague having increased. In Calcutta, although the plague deaths continue much the same as for many weeks past, the general mortality is increasing. The districts of Poona, Nasik, Surat, Thana, and Belgaum give cause for great anxiety. Cholera is raging severely in Kashmir, especially in Srinagar and the surrounding districts. It has rapidly gone down in Bombay city and very few cases are now occurring in the army. The principles to be observed in connexion with plague operations have apparently been finally settled by the recommendations of the Plague Commission and the resolutions on them published by the Government of India. These principles harmonise with the policy which has all along reigned in Bengal, so that it is not surprising to hear that the Lieutenant-Governor considers that the work of the Bengal Plague Commission is no longer necessary. The Local Commission has therefore been dissolved.

Sept. 20th.

BRISTOL EYE HOSPITAL.—The committee of the Bristol Eye Hospital have received £1263 as a result of the recent *fête* held at the Zoological Gardens, Clifton.

THE UNIVERSAL EXHIBITION OF PARIS.

(FROM OUR SPECIAL CORRESPONDENT.)

THE BELGIAN HYGIENE SECTION.

DRAWN away from the Exhibition by the long succession of International Congresses I feel, now that the eleventh hour is approaching, how little I have seen and described of this most marvellous accumulation of the world's wonders. Every visit means the discovery of something new, something which had been missed on a previous occasion. It suffices in travelling over almost the same ground to bear a few yards more to the right or to the left and the whole aspect changes and the range of subjects is altered. It is doubtful if anyone, however patient and insensible to fatigue, will be in a position to say that he has really seen the whole of the exhibits. Even if only a limited number of subjects are selected for study and examination the exhibits relating thereto are so scattered and so far apart that it requires much time and patience we find them all out. For instance, in regard to hygiene there is a part of the American sanitary exhibits at the farthest end of the Esplanade des Invalides. Then, though the buildings specially denominated as the sections of hygiene and of warming and ventilating are on the river side beyond the Pont de l'Alma, there are in the Avenue of Nations in the pavilions of Monaco, Finland, Roumania, and Luxembourg plans for draining various towns, &c. Again, all that relates to the sanitation of Paris, as I have already described, is exhibited in a large, separate, and interesting pavilion, but this is on the other side of the river. Then the medical and surgical exhibits are ever so far away by the Eiffel Tower, while the sanitary exhibits of several foreign countries are still further off by the Swiss village above the food products and at the extreme end of the old Gallery of Machines. To go to these different hygiene exhibits—and I have not mentioned them all—means a walk of some four miles, and on the road many other subjects would attract the attention of a medical man or a sanitary reformer as bearing indirectly on the questions taken in hand. For instance, in the hygiene section there is a specimen of an hotel bedroom. This is an invasion of the sanitary department by the furniture department, and yet what could be more appropriate? The exhibit is made by the French Touring Club and a very excellent idea it is. The Touring Club intend their exhibit to be an object-lesson to hotel proprietors, especially in Alpine districts where there is a constant flow of tourists who rarely remain more than a night or two. The exhibit shows how bedrooms should be furnished so as to secure the highest degree of cleanliness and the greatest immunity from vermin and from disease. The walls, of course, are rounded off at the angles and covered with a glazed material that can easily be washed, the bed is of iron, the furniture is simple, and the windows are contrived so that they may be opened at the top. Here, by the way, wire-gauze should be provided, so that while the air is let in the mosquitoes may be kept out. The most original suggestion is with regard to the floor. Underneath the boards the plaster of the ceiling of the room below is covered over with a bituminous coating which prevents the plaster from disintegrating and the dust from rising up through the chinks of the flooring. Here, then, the connexion between furniture and hygiene is demonstrated, and thus, indeed, all that relates to our homes, whether it be the furniture in the rooms or the way these rooms are built, forms part of the science of hygiene. The same may be said with regard to clothing, and we are just as anxious that the dyes used in making our clothes and underwear should be non-poisonous as that the wall-paper of our rooms should not be heavily loaded with arsenic.

DUST AND LUNG DISEASES.

Take another example. A surgeon proceeds direct to the medical section in the great westerly wing of the main building on the Champs de Mars. He emerges therefrom and at once comes upon the exhibits of the means of transport. This is not medicine or surgery, but how important is the question of transport to most practitioners. Here there are the very latest devices in regard to motor-cars, and here also are ideal broughams and an endless variety of bicycles. Then, having seen the latest improvements, who could resist going a step further to review the retrospective exhibits—the

first bicycles and many quaint old carriages and coaches. While engaged in this department the visitor will come upon the sanitary exhibits of Belgium. These are situated against the wall nearest to the Avenue de Suffren and face the carriages and coaches, the sledges, the sedan chairs, &c. Why Belgian sanitation should be amid the means of transport while the sanitary exhibits of Germany, Austria, England, and other countries are placed over and above the food supplies of the world, is one of those mysteries which is not easily explained. As, however, Belgium is among the most progressive of European countries in regard to sanitation, it is to be hoped that visitors have found their way to this section in spite of its inappropriate localisation. In any case, it has not escaped the attention of the jury, for they have awarded to the Belgian sanitary exhibits no less than two grand prizes, nine gold medals, seven silver medals, seven bronze medals, and three honorary mentions. The Belgian Government deputed Dr. Bonmarriage, founder of the Brussels Institute of Hygiene, to organise this section, and he has succeeded in gathering together a great amount of useful informative matter. From his own institute he sends, among other things, sections of the lungs of rabbits and micro-photographic slides of the same. These rabbits were exposed to the action of various forms of dust which in divers industries workmen have to breathe. We are thus able to see the lesions produced in the lungs by coal-dust, the dust of mills, of hemp, of cement, &c. He hopes by these means to demonstrate the necessity of greater care and better ventilation, and thus to reduce the prevalence of diseases of the chest in various industries. Professor Henri and Professor Albert Bergé of the Brussels University exhibit their method of sterilising water by the oxidising effects of a mixture of chlorate of potash and a weak solution of sulphuric acid. A current of air carries the gas evolved into a small quantity of water, and this latter is mixed with the water that has to be purified. This process can be employed both for small quantities of water and for large quantities. At Ostend 5000 cubic metres of water per day are thus sterilised. On the other hand, travellers can carry a small bottle of the solution with them, and with the aid of a pipette can sterilise a glass of water as it stands on the table while they are dining.

THE PRESERVATION OF CORPSES.

Close by, Dr. G. de Richter and M. F. de Recher, a civil engineer, exhibit their method of preserving dead bodies with formalin. The system is based on the penetrating powers of this antiseptic. To ensure this penetration the case in which the body is placed is divided into two. The body is placed in the upper portion, over a chamber or partition for the evaporation of the formalin. The formalin of commerce is employed. There are four recipients automatically fed and a slight current of air is provided to facilitate the evaporation. The formalin runs along channels over which wicks are suspended which take up the liquid and still further help its evaporation. Thus a minimum amount is spread over a maximum surface, and this maintains the air in a constant state of saturation. The body absorbs the formaldehyde (CH_2O), but it is constantly renewed by the evaporation of the formalin. One litre of formalin suffices for the treatment of a human body, therefore the process is much cheaper than that of refrigeration. On the other hand, it does not in any way interfere with any toxicological researches that may subsequently have to be made. The most remarkable fact is that when a body has been treated in this manner for four weeks it is not only sterilised but it will not decompose and it may be kept in the open air for an indefinite period. Thus a photograph is shown of a man who died from tuberculosis on Oct. 10th, 1893. The body was placed in the apparatus from Oct. 12th to Dec. 6th, and then laid out on a table in the open air. The photograph was taken in May, 1899, five months after the body had been thus exposed, and it was unaltered. This is, then, a great improvement on the old process of embalming as it does not necessitate the mutilation of the corpse. The process can also be applied to an ordinary coffin, and if the lid is partially of glass the body or the face may be seen intact years after death. Thus there is a photograph of a person who was placed in a coffin of this description on Dec. 8th, 1893. The photograph was taken in the month of May last. The body was then intact and it is stated that it remains in that condition at the present day. The process will render great service in medico-legal matters and for the preservation of anatomical material or of the bodies of animals and for the sterilisation of the bodies of persons who have died from infectious diseases, or for keeping the bodies of persons who have died at sea.

COMPRESSED AIR IN MINES.

M. Hanarte, civil engineer, exhibits an apparatus for the economic production of compressed air which is extensively used in the Belgian and French coal-mines. By special methods he dispenses with the aid of heat and thus reduces the first cost. The most ingenious device is the application of this compressed air as the motive power for working the drilling and other machinery used in the mines, so that the cost of compression is compensated by the economy of the cost of motive power, but from the health point of view the invention is still more important. The discharge of the compressed air provides a supply of pure air and this takes place precisely where the usual or general ventilation of the mines is least efficacious. Where there is a gallery that is open at both ends ventilation is comparatively easy, but miners generally work in holes, caves, or passages that have no opening at the other end and where it is not possible to establish a through draught. The discharge of compressed pure air at the head of such drillings is of the greatest benefit to the workers. It forces the foul air out of the hole and replaces it with pure air. The force supplied can also in many instances be used instead of that of explosives and thus the risk of accidents is reduced. The same system may be applied to workshops and factories and the motive power may be made to serve for ventilation as well as for manufacturing the goods produced.

OTHER BELGIAN EXHIBITS.

The Compagnie Générale des Conduits d'Eau of Liège give some indication of the vast public works which they have undertaken in various countries. The company are amongst the largest manufacturers of metallic pipes for the supply of gas or of water. They can make pipes that will resist a pressure of 150 atmospheres and which vary in diameter from two centimetres to one and a quarter metres. From 70 to 80 per cent. of the pipes they produce are exported to Holland, France, Spain, Roumania, Germany, Bulgaria, Turkey, Egypt, Japan, Siberia, South America, and other countries. The waters supplied to the suburbs of Paris, to the city of Rome and to many Italian towns, to Barcelona and to other Spanish towns, to Bremerhaven, to Utrecht, to Arnheim, to Bucharest, and to Vienna, pass through such pipes. It would be difficult to find a firm with a greater experience of the problem of the distribution of water in large towns. There are many other exhibits here that deal with water-supply, and notably full details are given in respect to the derivation of the springs or watershed of the Bocq for the supply of Brussels, which is the largest of such undertakings. Then, as the municipalities of several towns have made exhibits, these naturally include their system of water-supply. Perhaps the most interesting exhibit of this description is that of the town of Spa. This fashionable pleasure and health resort was formerly so badly drained and so deficient in its water-supply that severe epidemics resulted. As several English visitors were the victims of these unhealthy conditions the British Government made some diplomatic representations on the subject which, with the pressure of public opinion, ultimately produced the desired result and now the town authorities of Spa are quite proud of their new and good water-supply and are anxious to show that they have secured a complete system of sewers and that the branch sewers are all provided with automatic flush-tanks. The vital statistics of the town bear witness to the excellent effect of these reforms. There are any number of plans and drawings of hospitals, asylums, sanatoria, and the like, notably that of the Society of Israelite Mothers presided over by Madame de Rothschild, now Baroness Lambert. There is, first, a lying-in hospital where women, without distinction of creed and whether married or not, are received, but the special feature is that this institution continues to help both mother and child for many years. After the birth outdoor assistance is given, then there is a *crèche* for the child when he is three years old and a school when the age of six years is reached, and every effort is subsequently made to teach him a trade and enable him to earn an independent living. There is likewise an orphan asylum. Every contingency is provided for, and the poor mother and child who are fortunate enough to gain admittance to this institution may consider that they have reached a permanent haven. The jury awarded the

gold medal to this charity. The various bacteriological laboratories of Belgium have sent exhibits from which a very good idea of the work done in this field of research may be obtained and there are many interesting photographs to be seen showing the results which have been attained. Altogether the hygienic section of Belgium conveys a favourable and a fairly complete idea of the progress which has been achieved in that country in regard to sanitation.

Paris, Oct. 15th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Volunteer Medical Staff Corps.

SURGEON-LIEUTENANT-COLONEL W. COATES, commanding the Manchester Volunteer Medical Staff Corps, appeals for aid in providing drill accommodation. "To secure the efficiency of the corps, headquarters with a drill hall are absolutely essential." There is now an opportunity of acquiring land, but to carry out the scheme a sum of £12,000 is required. The appeal is based on the following very good grounds: (1) That companies of the Volunteer Medical Staff Corps are a necessary complement of the volunteer force of the kingdom; (2) that it is an immense advantage to the community that there should be in our midst thoroughly trained men capable of affording efficient assistance in the emergencies of accident and illness in civil life; and (3) that by this means a valuable opportunity is given to the youth of Manchester and district to follow a recreation which should improve both their physical, intellectual, and moral development. The use of the term "recreation" is quite correct, and this one has the advantage over many other forms of recreation that the benefit extends to others and is not confined to, or centred in, self. The recent war has shown not only other nations but our own somewhat sceptical people that the volunteers are not merely play soldiers whose exploits are confined to peaceful promenading, but that they form a valuable part of our insurance against foreign aggression, which would not be complete without a due proportion of the medical staff corps. Bearing in mind what has already happened, and also that it is the unexpected that does happen, the Manchester people will surely pay this modest insurance premium.

Early and Improvident Marriages.

At an inquest held recently Mr. Smelt, the Manchester coroner, made some remarks on "early and improvident marriages." The mother of a child who had come to his death through burns said that she had been married 17 years and was married at 17. She went out to work for 6*s.* a week, and left the child to take "pot luck," as her husband was earning nothing. Mr. Smelt said that on account of these marriages the English race was a degenerating and miserable race. A Zulu could not marry till he was 25 and possessed a certain amount of property. "In a fight under equal conditions he would back 50 Zulus against 100 men such as some who applied to be admitted into the British army." Whatever may be the value of this special statement there is no doubt of the degeneracy and deterioration of the masses of our town-bred population. It is saddening to see the pallid, stunted, ill-set up lads and girls, many of them married, streaming out from the factory gates at closing time, and still more saddening to see the puny infants, of perhaps a few months old, with emaciated faces and the weary careworn look of old age, who are brought by their ill-developed mothers to the out-patient rooms of our hospitals. Apart from the pity of it, the prospect of a large proportion of the next generation born of such a stock and living under the conditions at present prevailing in our large towns is a serious one for the nation. It suggests the question as to whether the heavy infant death-rate we deplore is a curse or a blessing. How to prevent this decay of our race is a problem which will not be solved under present conditions. Whether our system of education will do anything to give more correct views and to bring about a better mode of living seems more than doubtful.

Manchester Port Sanitary Authority.

A careful watch is maintained against the importation of plague by the Ship Canal. During September last the inspector at Eastham made inquiries as to the health of all on board the 197 vessels that passed through the lock into the port. Of these, 166 were British, 13 were Norwegian, and the rest were German, French, Swedish, and Belgian. On Sept. 3rd Dr. J. H. Crocker, the medical officer of health of the Port of Manchester, paid a special visit to Glasgow, examined all the cases of plague under treatment there, with the houses and areas from which they came, and visited the sanitary chambers and bacteriological departments, &c., of the sanitary authority. On his return, after consultation with Dr. J. Niven and Dr. C. H. Tattersall, the medical officers of health of Manchester and Salford respectively, he decided that a medical examination of everyone on board a vessel coming from Glasgow should be carried out. It was arranged with Dr. H. A. Bold of Trafford-road, Salford, close to the docks, that he should board the vessels at Mode Wheel and inspect the crews and passengers on the way to the docks. During the month 19 vessels from Glasgow and two from foreign infected ports entered the canal, but no case of infectious sickness was found.

Manchester Royal Infirmary.

The Manchester Royal Infirmary loses, in accordance with the rule as to the age-limit, the services of Mr. Walter Whitehead as a member of the active staff, and at a meeting of the board of management he was appointed an honorary consulting surgeon to the institution. Mr. William Thorburn, the senior honorary assistant surgeon, was unanimously appointed honorary surgeon.

Oct. 16th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Inaugural Address by the New Professor of Medicine of the University of Edinburgh.

ON Oct. 16th, at two o'clock in the afternoon, in the McEwan Hall, Dr. John Wyllie, the recently appointed Professor of Medicine in the University, delivered his inaugural address before a large concourse of students and others. Professor Wyllie was supported by a number of his colleagues in the Senatus, while the chair was occupied by Sir William Muir, Principal of the University, who briefly introduced the new Professor. Professor Wyllie devoted his opening lecture to the memory of the distinguished men who had occupied the chair in time past. He began his address by appreciative notice of the work and influence of Sir Thomas Grainger Stewart, his immediate predecessor. He then considered separately the seven occupants of the chair who preceded Sir Thomas Grainger Stewart—namely, John Rutherford, John Gregory, William Cullen, James Gregory, James Home, William Pulteney Alison, and Thomas Laycock. Having given a brief and judicial summary of the position held by these men he concluded his address as follows: "I feel that it is a very great honour to me that I have been elected to the Chair of Medicine. I feel also that I have taken upon me in accepting the office a very great responsibility. The history of the chair is all too splendid to be studied with perfect comfort by one who now comes for the first time to occupy it. But I trust that the example of the eminent men who have in the past been its occupants will be an inspiration to me and not by its very brilliancy a discouragement. I confess to you that it is to me a matter of great satisfaction that by my appointment to this chair it is determined that in the future my life shall be devoted to the teaching of medicine as it has been in the past and that my charge of wards at the Royal Infirmary will enable me to work towards the advance of medical science. The welcome which to-day you have so kindly given me encourages me to hope that I may be able to discharge my duties in such a manner as may be to the advantage of my students and to the satisfaction of my Principal and my colleagues in the University." The address was listened to in perfect stillness by the large audience, and the outburst of applause at its conclusion was convincing proof of the interest which it had aroused and of the popularity of the new Professor.

Professor Chiene on his Experiences in South Africa.

Professor Chiene opened the winter session of the class of surgery in the University of Edinburgh by an address in which he gave an outline of his experiences as a consulting surgeon in South Africa. The address was delivered in the McEwan Hall on Oct. 16th, when the Professor was given a most enthusiastic welcome by his students. One could better appreciate, he said, after even a short absence

that longing to be back in Edinburgh again so well expressed by one of her sons—Robert Louis Stevenson. Was it the persistence of the blues and the absence of greys which was so much felt by a dweller on the shores of the Firth of Forth? or was it a yearning for that want of sameness, that angularity so characteristic of Edinburgh weather? So much had happened in those six months. On his arrival in South Africa he had found himself at home amongst old students of the Edinburgh school. He then learned the imperial character of the Edinburgh school and the strong bond of union existing between its members. He was waited on by old students before he landed at Cape Town. They accorded him a most hearty welcome and entertained him most royally under the presidency of Dr. Scholtz, and on his way home, at Durban, he had a most hearty send-off under the kindly chairmanship of Dr. H. A. Dumat. They all sent their kindest regards to their old teachers and he could not help thinking that it would be a good thing for a teacher to visit occasionally those great colonial centres which formed so important a part in their *alma mater*. To prevent him thinking that all this kindness had a personal aspect he found an Edinburgh man in the steamer between Durban and Cape Town who had forgotten that he had been one of his pupils. Even in St. Helena he found an Edinburgh man, Dr. Roe, doing good work in charge of the Boer sick. He thanked the students for their kindness to him when he left Edinburgh in March and for the welcome they had given him on his return. He did not intend in this introductory lecture to discuss many surgical problems which had come under his notice nor could he enter upon the wider question of hospital administration in South Africa. On his arrival at Cape Town he was appointed consultant to the Cape Town District. His principal work lay at Wynberg, No. 1 and No. 2 General Hospitals, and at Rondesbosch, No. 3 General Hospital; Woodstock, Greenpoint, Simonstown, and Stellenbosch were also visited. In all these hospitals, with the exception of one, there were both British and Boer wounded. All were treated alike by medical officers, nurses, and orderlies. Some of the most serious cases were those of Boers, and he always found them most grateful for all that was done for them. He was struck by the number of cases of arterio-venous aneurysm, by the cases of hæmothorax ending in empyema, by the numerous cases of hernia requiring radical cure, and by the fact that the great majority of bullet-wounds healed by first intention, and that bullets passed through the cavities of the body without any apparent damage. One case had made a particular impression on him. A soldier lying on his face was struck by a Mauser bullet. The bullet entered above the left clavicle and passed through the thorax and abdomen and was removed from Scarpa's triangle on the right side. No bad results followed. Bullet-wounds at close range were more severe than those at a distance. The shrapnel cases were the worst. Shrapnel and lyddite were the two fears of the Boers. Patients in the wards were divided into two classes, those who wished to get back to fight and those who begged to be sent home. The first class were aseptic surgical cases, the second class those who suffered from surgical sepsis and medical diseases, especially dysentery. Towards the end of May he began his journey north, and his first halting-place was Kimberley, after passing through Deelfontein, De Aar, Orange river, Modder river, and Magersfontein with its sad memories. At Kimberley, under the guidance of Lieutenant-Colonel M. D. O'Connell, R.A.M.C., he found the great majority of patients in convents and halls. They seemed to be made as comfortable as was possible. In some cases, perhaps, there was hardly sufficient air-space. This was not to be wondered at in such extemporised hospitals. Most of the patients suffered from enteric fever, though there were many wounded. It was in Kimberley that he saw the most severe case of septicæmia that he had met with in his travels.

It was at Kimberley that he was first brought face to face with the problem as to what extent it is advisable to crowd a town with enteric fever patients. Subsequently in Pretoria Mr. Esselen, formerly Attorney-General to the Transvaal, an old dresser of his, complained to him of the contamination of that town. When would these buildings be fit for use again? He often thought of a remark of Sir James Y. Simpson: "Hospitals should be made of wood and burned every 10 years." On a splendid site outside Kimberley No. 11 General Hospital was being erected. He never saw better administrative buildings, operating theatre, and staff and nurses' quarters. De Beers supplied the workmen, the wood, and the electric fittings. He would not forget the last evening he spent at Kimberley when he got old Edinburgh friends and pupils round him. He started late at night for Vryburg, and they sang at the station "Auld Lang Syne" to the manifest astonishment of a crowd of Kaffirs.

At Vryburg he reported himself to General Sir Archibald Hunter, than whom there was no more popular general in South Africa. He went on with General Hunter to Doornbult and then got orders from him to push on to Mafeking at the earliest opportunity. As he was going back to Vryburg to wait his chance he was so fortunate as to find at Devondale siding on the top of a truck an old Edinburgh friend, Dr. W. H. Steele, going north with the x-ray apparatus from Kimberley. They reached Mafeking on May 1st. He did not know till afterwards what a risky journey it had been. They were gladly welcomed at Mafeking and were able to render much assistance. After spending some days in Mafeking seeing the British wounded and visiting the Boer wounded in prison and reporting on their condition to Eloff, he joined General Hunter at Lichtenberg. He travelled in an ox-wagon and during the first night they were stopped three times by the Boers. At Lichtenberg, after seeing several surgical cases among the British troops, General Hunter asked him to visit Commandant Lemmer who suffered from a severe brain injury. General Hunter took him to the door of the commandant's house and would have waited to hear the report had not Professor Chiene promised to communicate to him at headquarters the result of his examination. In Lichtenberg he met Dr. Cameron Dunlop, who had charge of a Boer ambulance. Dr. Dunlop told him that there were few enteric fever cases among the Boers. This, Professor Chiene thought, could only be accounted for by supposing that the majority of Boers were immunised by attacks of enteric fever in early life. He then returned to Mafeking and a few days later went down with the first batch of wounded to the Yeomanry Hospital at Deelfontein. After inspecting the Yeomanry Hospital—a hospital with 1000 beds and with every comfort and luxury—he passed through De Aar and Naauwport to Norval's Pont. Arrived among his Edinburgh friends he heard for the first time much that deeply affected him. Mr. Wallace and Mr. Cooper, Sergeant Darling, Sergeant Hay, and others had been seriously ill with enteric fever, while others had suffered from dysentery. Norval's Pont had been an important camping-ground since Oct. 1st and was covered with dried enteric and dysenteric dejecta. Dust-storms drove the poison into every nook and cranny of tents and huts. From the very first every precaution had been taken, but in his opinion it was no question of water or milk. It was one of dust and flies. During his stay at the Edinburgh Hospital others of the staff were taken ill. When he arrived at the hospital Dr. Boyd and his assistants had their hands full, and he could not speak too highly of their fortitude and endurance. On Oct. 15th the hospital was handed over to the Government, and the staff may be expected home in the middle of November. They had served their Queen and country nobly, and had ever before them the outstanding fact that they were citizens of no mean city and that they were bound to uphold the credit of their *alma mater* and the Royal Infirmary. As regarded the estimate of the Edinburgh Hospital in South Africa he would quote the words of Captain J. R. MacMunn, R.A.M.C., who was sent by Lord Roberts, along with Major W. Ll. Reade, R.A.M.C., to inspect the hospitals in South Africa. He heard him give evidence before the Royal Commission, and in answer to the chairman he said the Edinburgh Hospital was "simply perfect." When at Norval's Pont he visited Springfontein and the Welsh Hospital there.

In July he visited Bloemfontein, Kroonstadt, Johannesburg, and Pretoria. Bloemfontein was in a very different state to what it was in April and May when enteric fever was rife and when the difficulties of transport were so great. In July there were two large General Hospitals, Nos. 8 and 9, in full working order, with the Portland Hospital alongside No. 8. At Kroonstadt everything was in excellent order. Lieutenant-Colonel Oswald Wood, R.A.M.C., a former Edinburgh student, was in charge of part of No. 3 General Hospital from Rondebosch, and alongside of him was the Scottish National Red Cross Hospital under Dr. Clark. They were in good position and doing excellent work.

At Bloemfontein no churches were used but at Kroonstadt a large church seemed to him to make a very good hospital. He thought churches made good hospitals if the windows

extended from floor to ceiling. Major Gray was in charge of the church and the windows had been broken to admit air. It was then hoped to get the patients out of the town, for enteric fever patients did best in tents. While there he saw an excellent way of diminishing the necessity for so many orderlies. This was effected by joining the tents together side by side. When he arrived at Johannesburg there was no general hospital, only one field hospital, the patients being distributed over the town in the large and splendidly equipped Johannesburg Hospital and in halls and hotels. Before he left No. 4 Stationary Hospital from East London had arrived, some of the staff having been seven weeks on the way. No. 6 General Hospital had also commenced to arrive and the tents were being rapidly put up. He spent three days in Pretoria, where all the patients were in halls and schools, and where the Irish Hospital under Sir William Thomson, in the Courts of Justice, was doing most excellent work. In fact, the share that the civil surgeons had taken in the work in South Africa had been a very important one, and the help they had given to the Army Medical Department could be looked upon with pride. On his return to Johannesburg he was sent to Natal, but in order to get there he had to retrace his steps to East London. He travelled in a hospital train, of the comfort of which he spoke highly. The soldiers suffered who were sent down in ordinary trains and in the future some form of portable stove to heat milk and beef-tea should be supplied. A sufficiency of proper food could not be depended upon at the stopping places and the poor fellows often reached Cape Town worn and weary. He arrived at Durban on August 4th. His visits to the hospitals in Natal were hurried, but all he saw in Newcastle, Ladysmith, Estcourt, at Mooi river, and in Maritzburg and Pinetown impressed him with the clear level-headedness of the central medical authority. The task was simpler than in Cape Colony. The country was loyal, the railway service was uninterrupted, the distance was only from 200 to 300 miles, and only 50 000 men had to be fed and clothed instead of 150,000. He was struck with the incinerators for dejecta and with the scientific work done by Dr. Watkins Pitchford in Estcourt. The latter used Widal's reaction for diagnosing enteric fever and as he had no incubator he incubated his tubes in his pyjamas. He visited the Princess Christian Hospital at Pinetown Bridge. This hospital was like the Edinburgh Hospital and he hoped that both would be used as permanent convalescent hospitals. After giving evidence to the Commission at Cape Town his last official work was to visit the Boer prisoners in St. Helena. He was able to report to Lord Roberts that the sickness had almost entirely passed away and that the health of the camp was excellent.

He referred to the kindness and consideration with which the Boer wounded and sick were treated by the British and said that this was fully reciprocated by the medical men on the Boer side. He made the interesting statement that a large proportion of the latter had been educated in Edinburgh. Referring to the Commission he said: "Let us be thankful that the individual members of the profession have done their duty and let us wait with equanimity, knowing that only good can come from a thorough investigation into those charges which have stirred the sympathy of the nation."

Looking back upon his sojourn in South Africa three things made a great impression on him: (1) the gratitude, bravery, and patience of the soldiers in hospital; (2) that he had never before been privileged in the space of six months to give so much happiness to his fellow-men; and (3) that at the best war must be a miserable business. Lord Hopetoun, in bidding his Edinburgh friends good-bye, had said: "I shall be ready to serve my country whenever I am called upon to do so. I owe too much to her and the system under which we live ever to refuse to do my share of the country's work." That, said Professor Chiene, is the reason why our citizens, as soldiers, doctors, nurses, and orderlies, have volunteered from all parts of the Empire, drawn as by a magnet to South Africa. For everyone who went hundreds were ready from all over the Empire to take their place. He could not help thinking that those who had to stay at home deserved more credit than those who went. They had the weary waiting. Those in the stress and burden of the day had not time to think. "As his part is that goeth down to the battle so shall his part be that tarryeth by the stuff. They shall both part alike."

Professor Chiene concluded as follows:—We have all lost friends. We have all suffered. By our suffering this Empire has been welded together and strengthened. Let us endeavour faithfully (trusting not in our own strength) to face manfully the grave responsibilities of our position. Let our aim be to do justice to all men, and let us ever remember that the brotherhood of humanity includes all nations and all people, and that this great empire is but an atom of the universe, in which we all are made one for another, in which "Whatsoever is, is but the seed of that which shall be." "No ordinance of man shall over-ride the settled laws of nature and of God—not written these in pages of a Book—nor were they framed to-day nor yesterday. We know not whence they are; but this we know, that they from all eternity have been and shall to all eternity endure."

Edinburgh Royal Infirmary.

At a meeting of the managers of the Edinburgh Royal Infirmary on Oct. 15th Dr. R. A. Fleming, senior pathologist to the Infirmary, was appointed assistant physician.

Oct. 16th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Surgeons in Ireland.

A MEETING of the Royal College of Surgeons in Ireland will be held on Monday, Oct. 22nd, to elect a member of Council in place of Sir William Stokes, deceased. Mr. F. T. Porter Newell and Mr. John D. Hillis are candidates for the post.

Mater Misericordiæ Hospital, Dublin.

Quite a crowd of candidates have entered their names for the coveted position of resident pupil for the coming session at the Mater Misericordiæ Hospital. The election will take place on Nov. 7th of six resident pupils.

Meath Hospital and County Dublin Infirmary.

The inaugural address at the Meath Hospital was delivered on Oct. 15th by Dr. James Craig. The Lord Mayor of Dublin was in the chair, and there was a large attendance of visitors and medical men, including the students of the hospital. Dr. Craig dealt with the subject of tuberculous disease and alluded to the very high mortality in Dublin and Belfast from that infective disorder, now looked upon as preventable. Sir Charles Cameron, in moving a vote of thanks to Dr. Craig, stated that the Public Health Committee had just agreed to recommend to the corporation the adoption of a system of voluntary notification of tuberculosis, and explained that payment would be made for notification, while no penalty would attach to its neglect. The Lord Mayor said that he did not agree with Sir Charles Cameron that notification of the disease should be voluntary; he thought that it should be compulsory. In alluding to the Hospital for Consumption at Newcastle he remarked that although the city rates of Dublin were too high to permit the corporation to help the hospital it might be possible to extend the institution at Newcastle by a "county-at-large" rate.

Health of Belfast.

The death-rate for the week ended Oct. 6th has been 18·9 per 1000 from all causes, and 3·5 from the principal zymotic diseases, while in the corresponding period of last year the death-rate from all causes was 26·1 and 4·5 from zymotic diseases.

Watering-Troughs and Glanders.

From a report presented to the Public Health Committee of the city of Belfast it appears that since the water was turned off the troughs, on May 26th of this year, no case of glanders had occurred. The veterinary surgeon to the Public Health Committee advised the permanent closure of these watering-troughs, replacing them by standpipes, owners to provide their own buckets. This suggestion, which is in accordance with the advice given by the veterinary department in Dublin, was adopted. The principal carrying firms and the largest owners of horses in Belfast are also averse to the opening of the watering-troughs.

Monaghan and Cavan Asylum.

The annual report of Dr. E. M. Courtenay, inspector of lunatics, on this asylum was read at a meeting of the committee of management on Oct. 11th. It stated, among other things, that the condition of the institution as regards accommodation and overcrowding remained unaltered. The overcrowding of the dormitories and wards was inexcusable and called for

immediate relief. There was defective accommodation in the day-rooms, and it was pointed out that the responsibility for the providing of suitable accommodation rested with the committee and that it was necessary for them to satisfy the Lord Lieutenant that the requisite accommodation and buildings had been provided before the rate-in-aid could be paid. The temporary buildings, which were to have been completed in the spring of 1899, had not yet been occupied, nor had the furniture been obtained for them. The overcrowding of the asylum was not only disastrous to the treatment of patients but menaced their safety should any epidemic occur.

Winter Session of the Belfast Medical School.

The winter session (1900-1901) of the Medical School in Belfast began on Oct. 16th. In the morning Dr. H. L. McKisack gave the introductory address in the theatre of the Royal Victoria Hospital when there was a large audience of students and members of the medical and surgical staff. After welcoming the students on behalf of the staff Dr. McKisack referred to the recent losses which they had suffered by the death of Dr. Strafford Smith and by the retirement of Dr. Henry O'Neill. The new Royal Victoria Hospital, of which the foundation-stone is to be laid early in 1901 by H.R.H. the Prince of Wales, was described, and while the advantages to be expected from a thoroughly well-equipped modern hospital were fully acknowledged it was impressed upon the audience that earnestness on the part of teachers and students was the essential, and it was pointed out that much of the real progress had been effected with very simple and often imperfect apparatus. The importance of educating the senses thoroughly was therefore emphasised, whilst the mental education and the use of scientific diagnostic instruments were not to be neglected. The students were advised to strive to grasp the case in all its bearings and not to be content with discovering the pathology of an affected organ. After commenting on the difficulty of erecting a typical case as a standard for comparison and on the constant occurrence of variations, the lecturer summarised the advisory part of his remarks to the students as follows:—"(*a*) Follow the course mapped out for you during the session, without straying aimlessly from ward to ward. (*b*) Learn thoroughly how to examine a case and to take notes of it in a methodical and orthodox manner. (*c*) Follow up your cases perseveringly, examining them frequently and keeping notes of their progress. (*d*) Be as regular and punctual in your attendance at the hospital as at your meals, or, if anything, be rather more so. Come early and do not be in a hurry to get away. You cannot be better employed anywhere else. (*e*) Do not miss any opportunity of coming into the hospital as resident." College lectures began also on Oct. 16th.

Royal Victoria Hospital, Belfast.

Owing to the sad death of Dr. R. S. Smith and the regretted resignation of Dr. H. O'Neill, two important vacancies have occurred, one on the medical side, the other on the surgical side, of the Royal Victoria Hospital staff at Belfast. Dr. H. L. McKisack will succeed to Dr. Smith's place and become full physician, and up to the present Dr. W. B. McQuitty is the only candidate for the position of assistant physician vacant by Dr. McKisack's promotion. On the surgical side, Dr. A. B. Mitchell will become full surgeon, Dr. T. S. Kirk will become senior assistant surgeon, and Mr. Robert Campbell is the only candidate for the junior assistant surgeoncy. For the position of surgical registrar, vacated by Mr. R. Campbell, there will be a sharp contest, as already several candidates are in the field.

Oct. 16th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Giving of Medical Certificates by Hospital Internes.

THE Association of Medical Practitioners in the Department of the Seine has for some time past over and over again had to consider some of the many difficulties which arise concerning the application of the new law dealing with accidents to workmen, especially where the wounded man is taken to a hospital. The insurance companies naturally enough demand a medical certificate as to the extent of the injuries given as soon after the accident as it is possible to form an opinion, so that they shall know whether to impute liability for the accident to the originator of it or to the employer. The administrative body of the hospitals, however, place great difficulties in the way of the medical officers of the insurance companies with regard to their entry into the hospitals for the purpose of satisfying themselves as to the condition of the wounded man. In a recent case a medical student who was employed as *interne* of the ward refused to give entry to the insurance company's medical officer, saying that a recent circular of the director of the Assistance Publique gave *internes* the sole right of giving certificates with regard to hospital cases and that, therefore, he had no information to give. The medical officer of the insurance company remarked that he only wanted a certificate for the company so that it might be able to ascertain when the wounded man would be able to resume work and in particular how much compensation it ought to pay to the family of the workman. The *interne*, however, stuck to his guns and refused any information. The administrative council of the Medical Association of the Seine took up the matter and protested strongly against the attitude of young practitioners who begin their medical career with such an unbrotherly mode of action. It also went into the point whether a certificate granted by a student although an *interne* should be considered really valuable from a medical and legal point of view. Such students are only authorised to perform medical acts inside the hospital by a tolerance established by force of circumstances, but they have no legal right, without paying the proper tax (*patente*), to take responsibility for a written document which will go out of the hospital and eventually come on for discussion in a court of law. Such an act would come under the head of illegal practice of medicine, especially, as must be remembered, when the certificate has to be paid for. A letter was therefore sent to the Minister of Commerce dealing with the subject, and the Minister, who obviously found himself in a tight corner, replied that such a certificate as would be given by an *interne* was not a real certificate, that it was not designed to establish the right as between two adversaries at law, but simply to give an exact account from the beginning of the condition of the wounded man and by giving some indication of the probable results of the accident to enable the alderman of the ward (*maire*) to decide as to whether an inquiry should take place before a magistrate or no. The Medical Association protested against the hair-splitting of this distinction, for it argued that the certificate *was* a certificate and one moreover which was very important, dealing as it did with the conditions existing immediately after the accident—a state of things which certainly could not recur later, and so would be the most important piece of evidence at the trial. Besides, supposing that further explanations were necessary and that the *interne* were called upon to give evidence before the magistrate, would he have to be paid the regular fee due to a medical witness—namely, five francs? If so—and this was a course of events which was quite likely to happen—the reception of this sum, together with that already paid for the certificate, would be a second act of illegal practice. Unfortunately it is much to be feared that the Government, to get out of finding a solution of so difficult a problem, will accept the dangerous ruling of the Minister. On the other hand, it must be remembered that the law of Nov. 30th, 1892, granted certain concessions to *internes* and certain other students which were full of peril to medical practitioners. This law laid it down that such students should be allowed to practise medicine in time of epidemics or while acting as the *temporary* locum-tenent of a medical officer. Practice in the first case can be easily explained; the second concession was demanded by medical men themselves who feared that if ill or very tired they would not be able to get a substitute if they had to employ a qualified man. This, however, is only a temporary concession which has to be obtained previously from the prefect and which lasts for only three months, although renewable at the end of that time. It is this first clause of the law which is the cause of abuses. As a matter of fact, a prefectural order authorises every three months a certain number of students to perform acts of medical practice even when there is no epidemic and no question of filling the place of an absent medical officer. The object is to assure immediate attendance for urgent cases, so that they should not have to wait unattended for the visit of the surgeon of the day or until the following morning when the chief medical officer of the ward pays his visit. This, however, is no ground for arguing that such

students have the right to give certificates in case of accident for use outside the hospital. An injured workman or his employer has 48 hours' grace before he must hand over certificates at the Mairie. Such a certificate could easily be given on the following morning by the principal medical officer of the ward, at least in all cases where an immoveable dressing did not prevent a clear statement as to the injuries being drawn up. The president of the Medical Association is of opinion that the hospital medical officer cannot be considered to be replaced by his *interne* while he continues to practise in the same town. The replacing can only be considered as genuine if the medical officer is really absent or has left off work for the time being. Unless such is the case it would be inconceivable that a practitioner with one diploma and who had paid only his own tax should be able to practise by means of an intermediary. In these circumstances the Medical Association has appointed a committee which after due inquiry will decide as to whether the order of the Prefect of the Seine giving to *internes* the right to practise in hospitals should not be annulled by the Conseil d'Etat.

The Prophylaxis of Plague.

A recent order of the Minister of the Interior decrees that ships coming from localities definitely recognised as infected with plague or carrying cargo which has come indirectly from such localities cannot enter or discharge cargo at any port of France or Algeria, except Dunkirk, Havre, St. Nazaire, Pauillac, Marseilles, or Algiers. The Minister of the Interior will from time to time give notice of other ports which may under exceptional circumstances be thrown open to the above-mentioned description of vessels, due regard being had to the ship's bill of health and the bill of lading.

Oct. 16th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Health of New South Wales.

THE report of the Board of Health of New South Wales for 1898 has just been presented to Parliament. The population "is increasing at a rate such as to have led to its having become more than trebled during the 30 years covered by the censuses; the increase is partly due to natural increment and partly to immigration. The mean annual birth-rate for 10 years was 32·61 per 1000 of the population," but the Board noted with regret a continued fall in the mean annual birth-rate. The general death-rate had, however, also diminished, but the Board

regrets that while the death-rate of children under one year is diminished in the metropolitan district there is no such diminution in the country districts, where the rate is even higher for 1897 than for 1898. This is the more to be regretted in that it is generally admitted that many of the disorders carrying off young infants are to a great extent preventable, being largely caused by ignorance and carelessness in the management, especially of the food, of infants. The condition of the dairies continues to give the Board much solicitude, and that mainly because of the inefficiency of the supervision by municipal local authorities. The mortality rate from typhoid fever for the whole colony shows a tendency to progressive diminution; as does also, and more markedly, the rate for the metropolitan district. But in the country this decline is much less distinct. During the year 3302 persons in the colony were attacked by the disease; and the deaths numbered 245. The notification returns show that during 1898 scarlet fever attacked 6342 persons in this colony, an incidence at the rate of 4·75 per 1000 of the estimated mean population. As usual with scarlet fever the main incidence was upon persons under 15 years of age, with special predilection for age-group 5–10 years. The notified deaths from scarlet fever in the whole colony during 1898 numbered 51, a mortality at the rate of 0·04 per 1000. During 1898 diphtheria attacked 1493 persons in this colony, an incidence at the rate of 1·12 per 1000. There were 126 deaths from diphtheria notified during the year, a mortality at the rate of 0·09 per 1000. During the year nine cases of illness were reported to the Board under the Leprosy Act. It was found that six were cases of leprosy. One of these was a Chinese woman, three were whites of native birth who had never left New South Wales, and two were Chinese males.

The medical officer of health of the Hunter River combined sanitary districts, Dr. Robert Dick, has also sent in his report for the year 1899. He stated that the local authorities in the district had shown more activity in sanitary matters, though deficient in regard to thorough disinfection after cases of infectious disease and in systems of refuse removal, &c. Fewer deaths occurred from typhoid fever, influenza, measles, diarrhœa, and respiratory diseases other than phthisis. In many towns in the district cesspits still existed and the greater incidence of typhoid fever in houses with cesspits was very marked. In the town of Wickham the ratio was 1 case of typhoid fever to every 100 houses where pail-closets were used and 1 to every 48 houses where cesspits existed. An inspection of the whole of the dairies in the district showed a steady improvement in their sanitary conditions.

Isolation Treatment of Consumption.

A deputation recently waited on the Government of Queensland with a request that measures should be taken to provide for the isolation and separate treatment of persons suffering from consumption. The deputation pointed out that all that could be done at present was the establishment of hospitals for the reception of a percentage of those afflicted with the disease.

Regulations for Patent Medicines.

The same deputation also urged the Government to take some steps to regulate the sale of patent medicines and to insure the public against fraud. It was suggested that the Government should see that all proprietary medicines were analysed and their exact composition made known, and that the sale of such as were dangerous should be suppressed.

The North Sydney Hospital.

Some years ago a small cottage hospital was established in North Sydney. Since then the population of this division of the metropolis has increased to between 50,000 and 60,000 inhabitants, but nothing has been done to increase the hospital accommodation, which is utterly inadequate, and patients have to cross the harbour to the other hospitals which are also overcrowded. A deputation recently waited on the Government to ask for a grant of £20,000 for the erection of new buildings. The Colonial Secretary gave a favourable reply and promised to put this amount on the estimates. In his reply the Colonial Secretary observed that notwithstanding the liberal expenditure on hospitals recently the demand continued to outstrip the supply, and he "was afraid the hospitals were being made too attractive and were abused, patients preferring the treatment available to that which they could get at their own homes."

Obituary.

Deep regret was felt in Australia at the announcement of the death in England of Dr. Alfred Shewen who left Sydney about six months ago for a holiday trip to England in the hope that it would restore his failing health. Dr. Shewen came to New South Wales soon after taking his M.D. degree in 1873 and began practice as a physician in partnership with the late Dr. Fortescue. He soon reached a very high position and gained a large practice. He was one of the first honorary physicians at the Prince Alfred Hospital, Sydney, and was joint lecturer on clinical medicine at the university and a frequent contributor to the local medical societies and journals. He was extremely popular with both the public and the profession and was only 56 years of age at the time of his death.—Mr. Edward Hyacinth O'Doherty died suddenly at Brisbane on July 5th and his funeral was attended by nearly every medical man in Brisbane. He was educated at the Brisbane Grammar School and studied medicine in Dublin, returning to Brisbane in 1882 and joining his father, Dr. K. I. O'Doherty, in practice. For 17 years he was medical officer to out-patients at the Brisbane Hospital and latterly he was honorary physician. For many years he was a member of council of the Queensland Branch of the British Medical Association and in 1897 he was President. He was exceptionally popular with all classes; full of genial good humour, uniformly courteous and sympathetic, and often brilliantly witty, his charm was felt by everyone. He was remarkable for his loyalty to the profession, and all these qualities, combined with professional skill of no mean order, secured him success. His sudden death came as a great shock to the community.—The late Miss Dagmar Berne was one of the best known and most successful of the women practitioners in Sydney. She matriculated at Sydney University in 1888 and was a student at the Sydney Medical School for a time. She then went to London and Edinburgh, and was at the Rotunda Hospital, Dublin, for a year and returning to London was appointed house surgeon at the Women's Hospital. She commenced practice in Sydney in 1895 and continued in full work until recently, when she was attacked with phthisis and died suddenly from hæmorrhage on August 21st.

Sept. 8th.

Medical News.

KING'S COLLEGE, LONDON.—The following Entrance Scholarships have been awarded in the Medical Faculty:—Warneford Scholarships, £75 each: R. Taylor and A. M. Pollard. Medical Entrance Scholarship, 60 guineas: E. J. Miller. Sambrooke Medical Scholarships: £60, R. H. C. Gompertz; £40, A. D. Griffith. Open to all Faculties:—Clothworkers' Science Scholarships: £30 for two years, W. J. Marlow; and £20 for two years, O. C. Thompson. Engineering Entrance Scholarships: £15, N. G. Langrish; £10, J. H. P. Billrough; and £10, F. R. Fairmaner.

ST. GEORGE'S HOSPITAL SCHOLARSHIPS.—The following scholarships have been awarded for 1900: an Entrance Scholarship in Arts of the value of £150, Mr. Valentine Henry Blake; an Entrance Scholarship in Arts of the value of £50, Mr. James Aubrey Torrens, of St. Paul's School; an Entrance Scholarship in Science of the value of £85 Mr. Basil Nelson Tebbs, M.A., of Queen's College, Cambridge; an Entrance Scholarship in Science of the value of £42 10*s*., Mr. John Douglas Hope Freshwater, B.A., of Trinity College, Cambridge; and an Entrance Scholarship in Science of the value of £42 10*s*., Mr. Harry Bertram McCaskie, B.A., of Caius College, Cambridge.

MEDICAL FEES FOR LUNACY CASES.—The Devonport Board of Guardians consider that the sum of one guinea is too large a fee for medical men to be paid in pauper lunacy cases and recently approached the borough magistrates with a view to having the fee reduced. At the meeting of the guardians held on Oct. 12th it was reported that the magistrates did not share the opinion of the guardians. Eventually the board decided to write to the members of the medical profession in Devonport asking them if they would accept a fee of half a guinea for these cases, and the matter will be again brought before the magistrates.

MEDICAL FACULTY OF UNIVERSITY COLLEGE, LIVERPOOL: OPENING OF THE WINTER SESSION.—The winter session of the Medical Faculty of University College, Liverpool, was inaugurated on Oct. 13th under auspicious circumstances. The gathering included the Lord Bishop of Liverpool (Dr. Chavasse), who delivered the opening address and distributed the prizes; the Lord Mayor of Liverpool, the Earl of Derby, and other prominent Liverpool citizens. The Dean of the Medical Faculty (Professor A. M. Paterson) reported the progress made by the several departments during the past year, a *résumé* of which has already appeared in the columns of THE LANCET.[1] Each year brought additional valuable prizes for the students of the faculty. Two university fellowships, each of the value of £100 for one year, were now open to medical graduates of the Victoria University and were offered to encourage research at the close of the period of study. A colonial fellowship in pathology and bacteriology of the value of £100 a year for five years has been presented by Mr. William Johnston, and a medal in pathology, to be called the "Kanthack Medal," in memory of the late Professor Kanthack of Cambridge, a former distinguished student of the Liverpool School, was awarded now for the first time. The department under the guidance of Dr. Henry Briggs, the professor of midwifery and gynæcology, had been laudably active during the past year. Professor Briggs has brought his department to a high state of efficiency and has spared neither time nor money to effect that object. Formerly Liverpool students were forced through lack of means to seek midwifery instruction elsewhere, but now all but two students had obtained their midwifery curriculum in Liverpool. The Bishop of Liverpool, having distributed the prizes, expressed his deep interest in the fortunes of the young and vigorous University College of Liverpool, and dealt in a very interesting manner with the life and work of William Harvey, John Hunter, and Thomas Sydenham. His best wish for the students was that they might unite the culture of Harvey with the industry of Hunter and crown both with the love of truth, the love of God, and the love of man, which were the glory of Thomas Sydenham.

[1] THE LANCET, August 4th, 1900, p. 352.

A NEW dog-muzzling order, enforced on Oct. 15th, has been issued for Carmarthenshire.

ACCIDENT TO A GERMAN PROFESSOR.—Professor Rieder of Bonn, who has been entrusted with the reorganisation of the Turkish Medical Department, has met with a serious accident. While superintending the building of a hospital in Constantinople he fell a distance of 45 feet which resulted in an injury to the spine and a fracture of the foot.

SCARLET FEVER IN THE RHONDDA VALLEY.—Owing to the prevalence of scarlet fever in the Rhondda Valley the district council has called upon the school board to close seven of the public elementary schools for a period of six weeks. The outbreak began about a fortnight after the schools reassembled; the weekly number of cases since then has averaged nearly 60.

WATER-SUPPLY OF FALMOUTH.—At a meeting of the Falmouth Corporation held on Oct. 9th, a resolution was passed by 11 votes to two in favour of purchasing the waterworks of the town. A meeting of the ratepayers will be called to consider the matter. It is estimated that the sum of £74,500 will be required to purchase the waterworks and to carry out the necessary improvements.

FREEMASONRY.—*The Rahere Lodge, No. 2546.*—An ordinary meeting of the Rahere Lodge was held at Frascati's Restaurant, Oxford-street, W., on Tuesday, Oct. 9th, W. Bro. Walter Gripper, M.B., being in the chair. Bro. W. E. Bennett, F.R.C.S., was admitted to the third degree and Mr. R. H. Wellington, M.R.C.S., L.R.C.P., was initiated into Freemasonry. Subsequently some 30 brethren dined together.

UNIVERSITY OF CAMBRIDGE.—The Medical and Surgical Examinations this term will begin as follows: First M.B. (Chemistry) and Second M.B. (Anatomy and Physiology), Dec. 10th; Third M.B., Dec. 11th; First M.B. (Biology) and Second M.B. (Pharmacy), Dec. 13th; and M.C., Dec. 18th. On Oct. 11th the degree of M.D. was conferred on Robert Derwent Parker, B.A., M.B., B.C., of Gonville and Caius College.

VACCINATION EXPENDITURE.—At the meeting of the Devonport Board of Guardians held on Oct. 12th the vaccination committee, reporting upon vaccination fees, stated that they recognised that if vaccinations were to be performed successfully they must be paid for, and that the notable increase in the cost of each individual case was on account of the large amount of work entailed upon the public vaccination officers by the Order of 1898.

TYPHOID FEVER IN SOUTHWARK.—Dr. F. J. Waldo, medical officer of health of St. George-the-Martyr, Southwark, has reported to the vestry—at the request of the Local Government Board—on an outbreak of typhoid fever within the parish. He said that 102 cases of fever had occurred between Sept. 14th and Oct. 8th, of which number two had already died. 97 of the cases came from an infected area situated in the north-east portion of Ward 1—the poorest part of the parish. Many of those attacked lived in Queen's-buildings, which housed upwards of 3000 persons on three acres, and in Grotto-place, which was officially represented as an unhealthy area in 1899, but which had not yet been dealt with by the county council. A large proportion of those attacked were children of school age. There was no evidence of specific pollution of the drinking water, which was drawn from two companies which supplied the infected houses in about equal proportions. The milk-supply came from various sources and was free from the specific poison of typhoid fever. Many of the house-drains were defective and the sewers were either imperfectly ventilated or were not ventilated at all. The sewers in at least three streets had been condemned by the surveyor. Dr. Waldo said that he had visited every house where fever was present and that he was still investigating the origin of the outbreak. The chief preventive measures taken were: (1) isolation of 89 of the cases in hospital; (2) disinfection and cleansing of premises and of infected goods; (3) accommodation of 25 "contacts," or persons from infected tenements, in the parish reception-house; (4) flushing of the street gullies in the infected area; (5) bacteriological and chemical examination of water, milk, ice-cream, water-ice, and shell-fish; and (6) distribution of leaflets advising householders to refrain from drinking unboiled water or milk and from eating uncooked shell-fish.

BOOKS, ETC., RECEIVED.

ALLEN, GEO., Charing Cross-road, London.
The Child's Picture Grammar: "The Adventures of the Three Bold Babes," &c. By S. R. Praeger. 1900. Price 3s. 6d.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.
Manual of Physiology. By G. N. Stewart, M.A., D.Sc., M.D. Edin., D.P.H. Camb. Illustrated. Fourth edition. 1900. Price 15s. net.
Manual of Surgery. By W. Rose, M.B., B.S. Lond., F.R.C.S., and A. Carless, M.S. Lond., F.R.C.S. Third edition. Illustrated. 1900. Price 21s. net.

BALE, J., SONS, AND DANIELSSON, Great Titchfield-street, London.
The Croonian Lectures on the Degeneration of the Neurone. By F. W. Mott, M.D. Lond., F.R.S. 1900.

BLACKWOOD, W., AND SONS, London and Edinburgh.
Twice Captured; a Record of Adventure during the Boer War. By the Earl of Rosslyn. 1900. Price 10s. 6d.
How We Escaped from Pretoria. By Captain A. Haldane, D.S.O. 1900. Price 1s.

CHURCHILL, J. & A., Great Marlborough-street, London.
Guy's Hospital Reports. Vol. liv., being vol. xxxix. of the Third Series. Edited by R. C. Perry, M.A., M.D., and W. H. A. Jacobson, M.Ch. 1900.
Lectures on Medical Jurisprudence and Toxicology, as delivered at the London Hospital. By Fred. J. Smith, M.A., M.D. Oxon., F.R.C.P. Lond., F.R.C.S. Eng. 1900. Price 7s. 6d.

CLAY, C. J. AND SONS, Ave Maria-lane, London.
The Temples and Ritual of Asklepios at Epidauros and Athens. By Richard Caton, M.D., F.R.C.P. Illustrated. Second edition. 1900. Price 3s. net.
The Prevention of Valvular Disease of the Heart. By Richard Caton, M.D., F.R.C.P. Illustrated. 1900. Price 5s. net.

CORNISH, J. E., Manchester.
The Owens College, Manchester. A Brief History of the College. Edited by P. J. Hartog, B.Sc. Lond. and Vict. 1900. Price 12s. 6d. net.

DOUGLAS, G. A. H., AND CO., Glasgow.
Ambulance Catechism; being a Series of Questions and Answers in Ambulance Work. By William Roxburgh, M.B., C.M. Troon. Price 1s. 6d.

F. A. DAVIES COMPANY, Philadelphia.
Practical Uranalysis and Urinary Diagnosis. By C. W. Purdy, LL.D., M.D. Fifth edition. Illustrated. 1900.

GLAISHER, H. J., Wigmore-street, London, W.
Constipation and some Associated Disorders. By E. Blake, M.D. Second edition. 1900. Price 5s. net.

GREEN, W., AND SONS, London and Edinburgh.
The Essentials of Regional Anatomy. By R. J. A. Berry, M.D., F.R.S., F.R.C.S. Edin. 1900.

KIMPTON, H., High Holborn, London.
Essentials of Surgery—Questions and Answers. By Edward Martin, A.M., M.D. Illustrated. Seventh edition, with an Appendix. 1900.

L'ÉDITION MÉDICALE FRANÇAISE, Paris.
Comment on se défend contre les Vers Intestinaux—la Lutte, la Destruction, l'Expulsion. Par le Dr. Paul Sirod.

LEWIS, H. K., Gower-street, London.
Cancer of the Stomach: A Clinical Study. By William Osler, M.D., F.R.S., F.R.C.P. Lond., and Thomas McCrae, M.B. Tor., L.R.C.P. Lond. 1900. Price 6s.

LONGMANS, GREEN AND CO., Paternoster-row, London.
Malaria. By Professor A. Celli. Translated from the second Italian edition by J. J. Eyre, M.R.C.P., L.R.C.S. Irel., D.P.H. Camb. With an introduction by Dr. Patrick Manson. With maps and illustrations. 1900. Price 10s. 6d.

MASSON ET CIE, Paris.
Les Maladies qu'on soigne à Berck. Par F. Calot. 1900.

NISBET, JAS., AND CO., Berners-street, London.
Design in Nature's Story. By Walter Kidd, M.D., F.Z.S. 1900. Price 3s. 6d. net.

OLIVER AND BOYD, Edinburgh.
Angioma and other Papers. By John Duncan, M.A., LL.D. Edited by James Hodsdon, F.R.C.S. Edin. With memoir by John Chiene. With portrait. 1900. Price 5s. net.

PENTLAND, Y. J., Edinburgh and London.
Diseases of the Throat, Nose, and Ear. By P. McBride, M.D., F.R.C.P. Edin. Third edition. Illustrated. 1900.
Text-book of Physiology. Edited by E. A. Schäfer, LL.D., F.R.S. 1900. Vol. ii.

PUBLISHED BY THE CATHOLIC TRUTH SOCIETY, 69, Southwark-bridge-road, London.
The Catholic Temperance Reader. By the Rev. W. H. Cologan and Sir Francis R. Cruise. 1900.

RICHARDS, GRANT, Henrietta-street, London.
The Nineteenth Century: a Dilogue in Utopia. By Havelock Ellis. 1900. Price 3s. 6d.

SANITARY PUBLISHING COMPANY, Fetter-lane, London, E.C.
Essays on Consumption, together with some Clinical Observations and Remarks on Pneumonia. By J. E. Squire, M.D. Lond., D.P.H. Camb. With an introduction by Sir William Broadbent, Bart., M.D., F.R.C.P. 1900. Price 10s. 6d. net.

UNWIN, T. FISHER, Paternoster-square, London.
How to Read the War News from China. A Vade-mecum of Notes and Hints. With a Glossary of Military Technical Terms, and a map. 1900. Price 1s.
Masters of Medicine: Thomas Sydenham. By Jos. F. Payne, M.D. Oxon. 1900. Price 3s. 6d.

WILLIAMS AND NORGATE, Henrietta-street, Covent-garden, London.
The "Opus Majus" of Roger Bacon. Edited by J. H. Bridges, F.R.C.P. Vols. i., ii., and iii. 1900. Price 31s. 6d.
Kurzgefasstes Lehrbuch der Kinderheilkunde. Von Dr. Carl Seitz. 1901. Price 11s. net.
Kehlkopf-, Nasen-, und Ohrenkrankheiten. Von Dr. Richard Kayser. 1901. Price 4s.

A Case of Spleno-Medullary Leukæmia, by F. W. Mott, M.D., F.R.S., reprint, 1900 (H. K. Lewis, Gower-street, London), price 2s. 6d. net.—African Lethargy, or the Sleeping Sickness, by P. Manson, F.R.S., and F. W. Mott, F.R.S., reprint (Adlard and Son, Bartholomew-close, London).—A Case of Negro Lethargy, by S. MacKenzie, with a Note by F. W. Mott, F.R.S., reprint (Adlard and Son), 1900.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ALLARDICE, WILLIAM C., M.D. Glasg., has been appointed Certifying Factory Surgeon for Newcastle-under-Lyme.

BROWN, W., M.D. Glasg., has been appointed Medical Officer for the Scattered Homes of the Parish of Bristol.

CARSON, STEWART, M.B., C.M. Edin., has been appointed Certifying Surgeon under the Factory Acts for the Alston Rural District of Cumberland.

COLLIER, M. P. MAYO, M.S. Lond., F.R.C.S. Eng., has been appointed Senior Surgeon to the North-West London Hospital, Kentish Town-road.

DICKINSON, GEORGE P., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Honorary Surgeon to the Warneford Hospital, Leamington.

FOLEY, J. J., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Kilbeggan Division of the Union by the Tullamore Rural District Council.

FRASER, P., M.D. Edin., B.Sc., has been re-appointed Medical Officer of Health by the Carnarvonshire Joint Sanitary Authority.

GARLAND, EDWARD CHARLES, M.R.C.S., L.R.C.P. Edin., L.S.A., has been re-appointed Medical Officer of Health for the Borough of Yeovil.

GERRARD, ALFRED H., M.B. Lond., M.R.C.S., F.R.C.P., has been appointed Certifying Factory Surgeon for Wimbledon and Merton District in Croydon Rural District.

GIBBON, A. H., L.R.C.P., L.R.C.P., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Bury Town Council.

HARDY, F. A., M.B., M.S., has been appointed Clinical Assistant to the Chelsea Hospital for Women, Fulham-road, London, S.W.

HAWKINS, W. R. T., M.R.C.S., has been appointed Medical Officer for the Scattered Homes of the Parish of Bristol.

HILL, R. A. L., M.R.C.S., L.R.C.P., has been appointed Surgeon to the Wimbledon Division of the Metropolitan Police, vice O. W. Berry, resigned.

HOLLINGS, GUY, M.D., B.Ch., has been appointed Clinical Assistant to the Chelsea Hospital for Women, Fulham-road, London, S.W.

JACKSON, WILLIAM, M.D. Brux., D.P.H. Cantab., L.R.C.P. Edin., B.L., has been appointed Certifying Factory Surgeon for the Borough of Nelson, the Barrowford Urban District, the Townships of Blacko, Barley with Wheatly, Rough Lee, Goldshaw, Old Laund, and Wheatly Carr Booths in the County of Lancaster.

JUPP, RALPH T., M.B., B.S. Dunelm, has been appointed House Surgeon to the Royal Alexandra Hospital, Brighton.

LOVETT, W. L., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Certifying Surgeon under the Factory Acts for the Borough of Colne, Trawden Urban District, and the Township of Foulridge in Burnley Rural District.

MELLERSH, W. FRANCIS, L.D.S. R.C.S. Eng., has been appointed Hon. Dental Surgeon to the Royal Cambridge Asylum for Soldiers' Widows.

MORGAN, A. T., M.D. Brux., L.S.A., has been appointed Medical Officer for the Scattered Homes of the Parish of Bristol.

RICHMOND, J. R. M., L.S.A., has been appointed Certifying Surgeon under the Factory Acts for the Overton Rural District in the County of Flint.

SMYTH, E., L.R.C.P., L.R.C.S. Edin., has been appointed *pro tem.* Medical Officer of the Portaferry Dispensary District, vice D. S. Browne, resigned.

THORBURN, WILLIAM, F.R.C.S. Eng., has been appointed an Honorary Surgeon to the Royal Infirmary, Manchester, vice Walter Whitehead, resigned.

TRIBE, A. G., L.S.A., has been appointed Certifying Surgeon under the Factory Acts for the Rhondda Urban District.

WARD, F., M.D. Edin., has been appointed Honorary Medical Officer to the East Suffolk and Ipswich Hospital, vice B. Edwards, resigned.

WARNER, T., M.D. Lond., F.R.C.S. Eng., has been appointed Honorary Medical Officer to the East Suffolk and Ipswich Hospital, vice W. A. Elliston, resigned.

WETWAN, W. A., M.R.C.S., has been appointed Medical Officer of Health for the Borough of Bridlington.

WHITEHEAD, WALTER, has been appointed an Honorary Consulting Surgeon to the Royal Infirmary, Manchester.

WORTH, F. J., M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Certifying Surgeon under the Factory Acts for the Civil Parishes of Edenbridge, Hever, Cowden, and Chiddingstone in the Sevenoaks Rural District.

YOUNG, J., M.D. Glasg., has been appointed Medical Officer for the Scattered Homes of the Parish of Bristol.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—House Surgeon. Salary £50 per annum, with board and residence in the hospital.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Assistant Anæsthetist. Medical women eligible for the post.

CHELTENHAM GENERAL HOSPITAL.—House Surgeon for two years, unmarried. Salary £80 per annum, with board and apartments.

CORNWALL COUNTY ASYLUM, Bodmin.—Junior Assistant Medical Officer, unmarried. Salary £120, rising to £150 by £10 annually, with board, furnished apartments, &c.

COUNTY ASYLUM, Chester.—Junior Assistant Medical Officer, unmarried. Salary £160 per annum, with board (no liquors), lodging, and washing.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—Assistant House Surgeon. Salary £50 per annum, with furnished apartments, board, and washing.

DOWN DISTRICT ASYLUM, Downpatrick.—Assistant Medical Officer, unmarried. Salary £150, rising £10 annually to £200, with furnished apartments, board, washing, and attendance. Apply to the Resident Medical Superintendent.

FRENCH HOSPITAL AND DISPENSARY, 172, Shaftesbury-avenue, London.—Resident Medical Officer (not a female), speaking French, and unmarried. Salary £80 a year, with full board.

GUEST HOSPITAL, Dudley.—Assistant House Surgeon for six months. Salary at the rate of £40 per annum, residence, board, and washing.

HEREFORDSHIRE RURAL DISTRICT COUNCILS.—Medical Officer of Health for the Combined Districts for three years. Salary £530 per annum including expenses and disbursements. Apply to the Clerk, Hereford.

JARVIS' CHARITY, Staunton-on-Wye, Hereford.—Medical Officer, to reside in house provided by the Trustees, with garden and good stabling rent free. Salary £150 per annum and certain allowances.

JENNER INSTITUTE OF PREVENTIVE MEDICINE, Chelsea Gardens, London.—Assistant in the Department of Pathological Chemistry. Salary £300.

LAMBETH WORKHOUSE.—Assistant Medical Officer for the Workhouse, Renfrew-road, Lower Kennington-lane. Salary £100 per year, rising after two years' service to a maximum of £125 per year, with board, apartments, and washing at the Renfrew-road Workhouse. Subject to statutory deductions. Applications to the Clerk to the Guardians, Offices, Brook-street, Kennington-road, S.E.

LEICESTER INFIRMARY.—House Surgeon. Salary £120, rising £10 annually until the third year. Board, apartments, and washing provided.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Resident Medical Officer for one year. Salary £200 per annum, with board, lodging, and washing.—Also Assistant Resident Medical Officer for six months. Board and residence in the hospital and washing provided, and an honorarium given at the rate of 50 guineas per annum.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Resident Medical Officer for the In-patient Department, Bowdon, Cheshire. Salary £60 per annum, with board, apartments, and washing.

NORTHERN DIVISION OF SOUTH UIST.—Medical Officer. Salary £77 10s. Apply to Mr T. Wilson, Solicitor, Lochmaddy, Clerk.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon for six months. Salary £10 at the end of that period, with board, apartments, and washing.

NORTHUMBERLAND COUNTY ASYLUM, Morpeth.—Assistant Medical Officer, unmarried. Salary £125 per annum, rising £10 yearly to £155, with board, lodging, and washing.

PARISH OF ST. LEONARD, Shoreditch.—Second Assistant Medical Officer for the Infirmary, Hoxton street, N., for six months. Salary at the rate of £100 per annum, with rations, washing, and furnished apartments in the Infirmary. Applications to the Clerk to the Guardians, 213, Kingsland-road.

PARISH OF ST. MATTHEW, Bethnal Green, London.—Clinical Assistant at the Infirmary, Cambridge-road, N.E., for six months, unmarried. Salary at the rate of £40 for the six months, with board, lodging, and washing. Apply to the Medical Superintendent of the Infirmary, Cambridge-road.

ROTHERHAM HOSPITAL.—Assistant House Surgeon. Salary £80, with board, lodging, and washing.

ROYAL FREE HOSPITAL, Gray's Inn-road, London.—Two House Physicians, a House Surgeon, and a Casualty House Surgeon, all for six months. Board, &c., provided.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London.—House Physician for six months. Salary at the rate of £40 per annum, with furnished apartments, board, and washing.

ROYAL HOSPITAL FOR INCURABLES, Donnybrook, Dublin.—Resident Medical Officer for one year. Salary £80 per annum, with board and furnished apartments.

ROYAL INFIRMARY, Sheffield.—House Physician. Salary £100 per annum, with board, lodging, and washing.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Ventnor, Isle of Wight.—Assistant Resident Medical Officer, unmarried. Salary £100 per annum, with board and lodging in the hospital. Applications to the Secretary at the London Office, 34, Craven-street, Charing-cross, W.C.

ROYAL SEA BATHING HOSPITAL.—Resident Surgeon. Salary £100, with board and residence. Apply to the Secretary, Royal Sea Bathing Hospital, Offices, 30, Charing-cross, London.

ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Assistant House Surgeon for six months. Salary at the rate of £50 per annum, with rooms, board, and washing.

ST. MARY'S HOSPITAL, Quay-street, Manchester.—Two Resident Medical Officers (Senior and Junior) to attend Home and Out-patients for six months. Salaries £70 and £65 per annum respectively, with board and residence.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Assistant House Surgeon for six months. Salary £75, with residence, board, and washing.

SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon for six months. Honorarium at the rate of £60 per annum, with residence, board, and washing.

TAUNTON AND SOMERSET HOSPITAL, Taunton.—Assistant House Surgeon for six months. Salary at the rate of £30 per annum, with board, lodging, and laundry.

THE CHIEF INSPECTOR OF FACTORIES gives notice of vacancies for Certifying Surgeons under the Factory Acts at Osmotherly, in the North Riding in the county of York; and at Masham in the North Riding of the county of York.

UNIVERSITY COLLEGE, London.—Pathologist.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon for twelve months. Salary £70 per annum, with rooms, board, and washing.

WOOLWICH UNION.—Assistant Medical Officer at the Infirmary, Plumstead, unmarried. Salary £120 per annum, rising £10 annually to £150, with apartments, rations, and washing. Subject to statutory deduction. Apply to the Clerk to the Board, Union Offices, Woolwich.

WORCESTER GENERAL INFIRMARY.—House Surgeon for three years. Salary £100 per annum, with board and residence.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary £110 a year, with board, lodging, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

HAINES.—On Oct. 12th, at Brookside, Winfrith Newburgh, Dorchester, Dorsetshire, the wife of Frederick Haselfoot Haines, M.R.C.S., L.R.C.P., D.P.H., of a daughter.

LILLIE.—On Oct. 10th, at Fairview, Albert-road, Ashford, Kent, the wife of Cecil Firmin Lillie, M.B., of a son, stillborn.

MURRAY.—On Oct. 12th, at Dunoran, Renton, Dumbartonshire, the wife of David Murray, M.B., C.M., of a daughter.

PEARSON.—On Oct. 6th, at the Crofts, Castletown, Isle of Man, the wife of Ellis Pearson, F.R.C.S. Edin., of a daughter.

PITCAIRN.—On Oct. 16th, at Parkhurst-road, Holloway, the wife of John J. Pitcairn, M.R.C.S. and L.R.C.P. of a daughter.

ROBERTS.—On Oct. 11th, at Clivedon-place, S.W., the wife of Edward A. Roberts, M.D., of a daughter.

SEGUNDO.—On Oct. 15th, at Brook-street, Hanover-square, the wife of C. S. de Segundo, M.B., B.S. Lond., of a son.

VAUGHAN.—On Oct. 10th, at Crewe Cottage, Crewe, the wife of Alfred Ellis Vaughan, L.R.C.P. Edin., of a son.

MARRIAGES.

HAWTHORNE—LORIMER—At Marylebone Presbyterian Church, London, W., on the 10th inst., by the Rev. George Hanson, M.A., D.D., Charles Oliver Hawthorne, M.D., M.R.C.P., to Janie Lorimer, M.B., Ch.B., daughter of William Lorimer, Esq., Glasgow.

OLIVER—LEDGARD.—On the 16th inst., at Holy Trinity Church, Clapham-common, by the Rev. B. Wilson, vicar of Battyeford, cousin of the bride, assisted by the Rev. W. T. Hollins, vicar of St. James, Clapham, George Oliver, M.D., F.R.C.P. Lond., of Harrogate, to Mary, daughter of the late W. Ledgard, of Roundhay, Yorkshire.

TINLEY—LEA.—On Oct. 12th, at St. Oswald's, Lythe, Yorks, Thomas Tinley, M.D., J.P., of Hildegard House, Whitby, and the Bungalow, Sandsend, to Annie Mary, elder daughter of Thomas Lea, Abbey-terrace, Whitby.

WHITE—RANDLE.—On the 11th inst., at St. Andrews, Ashley-gardens, Arthur T. White, M.R.Cs., L.R.C.P., Principal Medical Officer, Nile Reservoir Hospital, Assuan, to Mabel, eldest daughter of the late N. Randle of Bombay and Mrs. Randle, of 25, Morpeth-mansions, Victoria-street, S.W.

DEATHS.

LANGDON-DOWN.—On Friday, 5th Oct., 1900, at Normansfield, of pneumonia, Mary, wife of the late J. L. H. Langdon-Down, M.D., F.R.C.P., J.P., of Normansfield, Hampton Wick, and No. 81, Harley-street, W., in her 72nd year.

REDMAN.—On Oct. 9th, suddenly, J. H. Redman, L.D.S., of Wimpole-street, London, and Old Steine, Brighton.

SAVAGE.—On Oct. 3rd, at Loudon-road, N.W., Henry Savage, M.D., F.R.C.S., one of the Founders of the Samaritan Free Hospital, in his 91st year.

SWAYNE.—On Oct. 12th, at Pembroke-road, Clifton, Bristol, Samuel Henry Swayne, M.R.C.S., L.S.A., aged 79.

YOUNG.—On Oct. 11th, at Melville lodge, Ventnor, I.W., David Young, M.D., late of Rome, aged 61 years.

IN MEMORIAM.

MACKEY.—In memory of my dear husband, Stephen William Mackey, L.R.C.S.I., L.K.Q.C.P.I., L.M., the anniversary of whose death occurs Oct. 24th. R.I.P.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE DRUGGIST AND THE QUACK.

WE have received a letter from an officer in the Royal Army Medical Corps which we print below with its extraordinary enclosures. The letters from Mr. A. J. Paul reveal the fact that he has acted as a quack as much in the interests of an enterprising druggist as in his own. Mr. Paul's handwriting shows him to be a German, which accounts for the obscurity of his English literary style, but there is no doubt whatever about his vocation. He is a dangerous quack, and a druggist who respected his calling would hesitate to assist him in his dangerous work and to make money through his agency.

To the Editors of THE LANCET.

SIRS,—I send some letters which came to me through the Provost Marshall of this town, as they show how a medical quack in the Transvaal has acted as commercial traveller to a druggist. Please do what you think best with the letters.

I am, Sirs, yours faithfully,

Sept. 15th, 1900. LIEUTENANT R.A.M.C.

[ENCLOSURES.]

p. k., Badfontein, *vid* Machadodorp,
24th of June, 1899.

DEAR SIR,—Medicines received in good order. Thanks for instructions. I hope to do a lot of business with you. As you see the medicines do very good, and nearly daily I get more to do. People don't trust much in Lydenburg doctors. I send with next post p.o.o. ad £2 16 0, as I have to send to Lydenburg for it—and the opportunities are very scarce, Badfontein is only a store 2 hours on horse back from here. When you send me medicines please send me a/c at the same time. I received only one a/c ad £2 15 8, but for the last 4 bottles I did not yet receive one. Some times it might happen that I send you a/c a little late, according to occasions to town, so I hope that you will not blame me if it happens. Please send me by return:—

1. For an old woman of 63. Womb comes down *every* morning and then it is very hot—like burning—a few hours after that she is getting alright again.

2. For Mrs. you sent me medicines for. Showed me her breast—(*Crammen*)—between them she has got some like erysipelas—so it looks. and she told me that she is at an other place the same (she did not *show* it but that is between her legs!!) She is very fat and stout—she got a baby.

3. One Mrs. is 36 in a certain position—being in the last month—pains in the cross of her back, and in the calfs of the legs—pain under chest, left side—headache—she is very weak. She has been sick for about 3 month. She is mother of many children.

4. One daughter of 17. About 3 months ago in the time of her monthly discharge she came into cold water—then the sickness disappeared—sometimes does not come in many weeks, since never regularly. Pain under chest left side.

5. A man caught a cold when on last commando in October—never got better—pain in his forehead and face and jaw-bones. He tried Ayers Pectoral—without any good.

6. One Mrs. about 31—7 years ago when she got last baby—the after-birth did not come off well—but not taking notice she walked on. She is for a very long time complaining about tooth-ache, then the pain goes into her head, after that under chest and back. I should be pleased if you could give me the best you can find for her also for her teeth, which are hollow. She tried all kinds of medicine without results.

7. 3 Lung openers.

You understand dear Sir that I prefer your own medecines—none of Ayers or Chamberlains. Trusting that you will send as soon as possible.

I remain, yours sincerely, with kind regards,

A. J. PAUL.

Please send at the same time a/c. P.

If I get your a/c to-day at Badfontein then I will make it one p. order! Last Sunday I drove 3 wurms out of *one* woman. I regard that as a curiosity. I will have a lot of it to do with those tape wurm bussiness. Kind regards. P.

No. 8. A woman, 39; pain left side under her chest; discharge regularly except once. She is always very cold, even when it is a hot day. She has got a dozen children. She is very poor.

9. A young man of 20; pain on the bottom of his stomach. His life is always open, and he can eat whole day long. No wurms.

Same man wants some to purify his blood.

Yours truly,

PAUL.

P. K. Badfontein, viâ Machadodorp,
11 July, 1899.

DEAR SIR,—Please supply me with friday coach here.

G. B——, 56 years.—Pain in his bladder, pain under short ribs; can hardly piss he remembers. Kept it up too long.

Somebody about 35.—Talks about *aambeier* in his chest—but I don't understand him—I never heard about that. He is very painful under his breast, legs, back, etc.

E. N——. 28 years. Pain both sides of his breast and between his shoulders. After meals he feels dejected. Headache.

V. J——. 1½ years—thread wurms.

Mrs. J. C——. She got medicines last week—she got a cold—she is getting better, but not recovered yet; she feels pain still, but not as it was before. She is that Mrs. of 36 No. 3.

She is very weak. Perhaps wants that tonic. High family way.

Mr. V——, about 63.—I gave him lung opener; he feels better. Got a painful place between shoulders about 4 inch diam.; he feels little better. When he touches his *left* arm *than* at the same time wind comes up out of his mouth any time wherever he touches; that arm is painful.

Mrs. V—— 62. I gave her long opener—feels better—gave her pain balm for shoulders—feels better. Wants some more medicines for *chest* and pain in the arms from shoulder to fingers. I think this is Rheumatisme.

If you can manage it to send those medicines on wednesday or thursday morning—than I can have them with friday coach—please enclose your a/c—that I can settle. As I wrote—if you want any security—as you don't know me—then I can let you have it, that you need not to be afraid.

With kind regards

Yours sincerely

A. J. PAUL.

p. k. Badfontein, viâ Machadodorp,
17 July, 1899.

DEAR SIR,—I have been very busy so could not answer one of your letters up till now. By opening the parcels at the store I found 2 lung openers broken—it must have happened not far from the store—while on the coach, as all papers and wood wool was wet yet. Further all recd in good order. Lung opener for Mrs. —— does not do much good yet. She has got that pain in shoulders and awfully headache still. I got no more General mixture, otherwise I would have supplied. Mrs. of 36 is nearly recovered—after doctoring in Lydenburg for three months she got worse and worse, your medicines therefore first class. About a/c up to £10. Thanks for your confidence. I shall regularly settle up. Saturday I wired.

Send by rail to Machadodorp, further by coach, 12 Lung openers, 12 General Mixtures, 12 Whouping-cough. Whouping-cough broke out. Please give me some particulars about children from 5 months to 2 years. Same time you might inform me for what kinds of sickness *General mixture, Lung openers* and *Tonic acid is to be used.*

You will please send me a measure-glass and 1 syringe—those thing come in very handy.

Is lung opener also good for inflammation of lungs?

Some people (women) are complaining about *darkness* in their eyes. What can I do? I suppose it is in connexion with monthly discharge, but I am afraid to do anything in this line as an eye is a very weak thing. I think you may send me some *oog-water* en een klein spuitje om oogen in te spuit. At the same time you may let me have my full a/c after all these ordered medicines then I know what to charge.

Very wonderful it is that people all come to me after so very good results with Mrs. C——. Dr. O—— in Lydenburg supplied her with medicines and at last they gave it up as she was nearly dying. I was very sure that your medicines after my informations would do good—so I took it on me to try my best and the results are *very* wonderful. If I know now exactly, *according to ages* how to supply the *doses.* I am well informed and can make some money out of it. Lung openers as last sent are very good.

With kind regards and trusting to receive all particulars about whouping-cough medicines, how to mix, etc.

I remain, with most respects, yours sincerely,

A. J. PAUL.

"SECRET COMMISSIONS AND THE MEDICAL PROFESSION."

To the Editors of THE LANCET.

SIRS,—We sincerely thank you for calling attention to the circular marked "private" which was issued by us in reference to our project for visiting the thermal springs of New Zealand. On Sept. 27th last our attention was called to the breach of professional etiquette committed by us, when the offending circular was at once withdrawn and cancelled, the precise number issued being only 32, and these were sent to specialists of high repute only. Please note the class of cases proposed to be treated, and that in the interests of all we propose to take charge of such patients only who are not likely to require medical aid other than can be obtained during the voyage; and for the purpose of determining this we may require, in the interests of the patients themselves in cases of doubt, the assistance of medical men. We quote the following paragraph from the New Zealand Steam Shipping Company's Monthly Circular as it explains the service required and intended to be covered by the "secret commissions" referred to: "The Company reserves the right of refusing to carry any passenger who may be mentally or physically afflicted, and who must on booking state the nature of any infirmity. Any passenger suffering from infectious disease

will not be permitted to embark." The so-called "secret commissions" were intended to cover fees for assistance in this direction and in no way to act as a bribe or bring corrupt influences to bear, which would indeed be a very tall order. All our arrangements are based on the assistance of only qualified medical men and their assistants. In the meantime we shall be glad if you will give the same prominence to this rejoinder as you have given to your attack upon our venture and oblige.

We are, Sirs, yours faithfully,
J. BASTOW AND SON.

Woodbine Villa, Barlsfield-road, Wandsworth-common, S.W.,
Oct. 13th, 1900.

"MOTOR-CARS FOR MEDICAL MEN."

To the Editors of THE LANCET.

SIRS,—Your correspondents upon this subject seem to be decidedly depressed. I should prescribe a good run on a good car or trike for them both. Mr. Hirsch takes a gloomy view of cars in general, apparently because he has had rather a rough time with his own in particular. Does not your other correspondent give himself away when he confesses that he judges the capabilities of autocars by the number he sees in dock? Would it be equally fair to say that humanity is diseased because a hospital was full? Admittedly cars break down, just as horses fall, kick, shy, bolt, and smash up traps. Perfection is not yet attained in anything, not even in our profession, but we do not therefore withhold our help because we cannot guarantee a cure. I began, an absolute novice, to use a motor trike last January in miserable weather and very unfavourable conditions. It gave me no trouble, cost next to nothing to run, and so far from making me late made my work seem very light and easy. This is the other side of the question.

I am, Sirs, yours faithfully,
CLAUDE A. P. TRUMAN,
Honorary Secretary, Reading Automobile Club.

Reading, Oct. 15th, 1900.

To the Editors of THE LANCET.

SIRS,—Several letters have lately appeared in your correspondence columns on the above subject. Let me say, as one who has a general knowledge of all the best known makes, that in my opinion no motor-car has yet appeared that can be said to be in every way suitable for the use of medical men—up to the present they are all too intricate. What a medical man wants in a motor is one that can be as easily controlled and managed in going from house to house as an ordinary horse and trap and not one made for speed, and I may say that one of this description will shortly be on the market—a motor moderate in price, comfortable, reliable, simple in construction, without belts, chains, or chain wheels, and capable of being understood at once, thus doing away with the necessity of having a skilled driver. Your readers may expect an announcement of this in your advertising columns shortly. I am, Sirs, yours faithfully,

Oct. 15th, 1900. MOTIST.

To the Editors of THE LANCET.

SIRS,—I have noticed with regret the letters on this subject in your paper. My experience is fortunately quite different. I have had a small car two years. In this time I have had no trouble whatever with the engine; my only worries have been tyres, chains, and wheels, &c. The car has carried me about 11,000 miles over all roads and in all weathers, including two tours, and is still going splendidly. This week I have travelled over 200 miles easily in my work. The car does the work of more than two horses. It costs me altogether between £30 and £40 a year, which is certainly much cheaper than two horses and infinitely less trouble and worry. Another advantage is the speed. I can keep up a good 10 miles an hour up hill and down dale, or 12 or more miles an hour on the level, which is an immense saving of time and consequently of money. In my experience of country work a motor is a brilliant success. The only point is that one must understand the engine and take care of it, and the chains, &c., and it will repay one. For pleasure nothing can surpass it, and automobilism is a most fascinating amusement.

I am, Sirs, yours faithfully,

Oct. 17th, 1900. BENZ CAR.

A QUESTION OF BOYCOTT.

THE writer of a letter, asking if a medical man should be boycotted because of the circumstances under which he resides in a certain house, has omitted to give us his name and address.

THE PROSPECTS OF THE NEWLY-QUALIFIED MEDICAL STUDENT.

To the Editors of THE LANCET.

SIRS,—At the distribution of prizes to the successful students of St. Thomas's Hospital on Oct. 2nd, Sir William Mac Cormac stated that in his opinion the present time was most favourable for entering the profession with the assurance of earning a competency; he also stated that the average increase of medical men was 450 during the last three years and 846, or nearly double the number, during the five previous years. Mr. Stansfield Collier, on the other hand, in his introductory address to the students of St. Mary's Hospital, said ..... "from the point of view of a livelihood—aye, there's the rub."

An eminent consultant like Sir William Mac Cormac cannot have the experience of a general practitioner in such matters. When one considers the large number of patients who would have paid the medical attendant a reasonable bill but who now are members of medical aid and benefit clubs, provident dispensaries, or attending the out-patient departments of special or general hospitals, the outlook is certainly anything but a bright one. The medical schools advertise largely, scholarships are offered to attract the student. It is natural enough for the staff to wish their own particular school to be a success, they therefore try to get a good entry. When we consider that the staff consists mainly of men in consulting practice who, with few exceptions, know little, and in many cases care less, about the general practitioner's struggle for existence, and are mostly brought into contact with the successful practitioner but do not meet or hear of the unfortunate man buried in a slum or forced to keep a sixpenny dispensary, of what value is the consultant's opinion? The late Sir James Paget's figures of 276 failures in 1100 medical men kept under observation for a period of 16 years do not sound encouraging. What would the number of failures be at the present time? Has Sir William Mac Cormac any idea of the number of young and middle-aged medical men trying to buy practices or settle down in likely town or country districts? As house surgeon to a provincial hospital for many years I was often consulted by medical men who were thinking of starting practice in the neighbourhood. The cry of many was this: "I have enough money to buy a practice, or a share in a practice, but have wandered about the country during the past two years (often more), and although I can get a few locums and assistantships I have been quite unable to find any suitable opening." The unfortunate medical man with money to buy a practice finds things bad enough, but woe to the man without any.

I am, Sirs, yours faithfully,

Oct. 16th, 1900. G. P.

THE SPAS OF CENTRAL WALES.

To the Editors of THE LANCET.

SIRS,—After spending a very pleasant holiday at Llandrindod Wells I would, with your permission, make a suggestion to the Balneological Society that they should imitate their French *confrères* and organise trips to the various inland watering-places during the month either of August or September. Although I am fairly acquainted with most of the inland watering-places I must honestly confess that for beauty of scenery and for exhilarating air the neighbourhood I have mentioned stands very high in the list. I say nothing about the waters because I am not competent to do so.

I am, Sirs, yours faithfully,

Cardiff, Oct. 13th, 1900. T. GARRETT HORDER.

"A NEW WOOD FOR STREET PAVING."

WITH reference to the note on this subject which appeared in our issue of Oct. 13th Mr. E. M. Allcott, the introducer of the wood in question, writes to us to say that the wood "is treated in its natural state, no acids or chemicals being used whatever." He also sends us a copy of a portion of a report of some experiments made by Mr. Weaver, surveyor to the Kensington Vestry. Mr. Weaver found that the red gum wood placed under pressure in a creasoting tank absorbed "practically none at all," whereas deal absorbed "10lb. of creasote to the cubic foot." This non-absorbent quality is certainly valuable from a sanitary point of view.

THE REMOVAL OF SUPERFLUOUS HAIRS.

To the Editors of THE LANCET.

SIRS,—I hope some of your readers who have tried removing superfluous hairs from the face will give me the benefit of their experience. I have a patient, a girl, who besides being very short has a well-marked moustache. These factors, especially the latter, make her very shy and morbid, and I feel that if she could have the hairs removed she would be much improved in health.

I am, Sirs, yours faithfully,

Oct. 10th, 1900. BATH.

*** Our correspondent is referred to THE LANCET, vol. i., 1899, pp. 1202, 1271, 1340, 1408, and 1468.—ED. L.

YORKSHIRE SANITARY INSPECTORS' ASSOCIATION.

THE annual meeting of this association took place at the Council Hall, Rotherham, on Saturday, Oct. 1st, 1900, where Mr. T. Pridgin Teale presided. Mr. Teale was re-elected president and Mr. Evington, as chairman of the branch council, gave an address in which he mentioned that the association had over 600 members, 100 of whom belonged to Yorkshire. Dr. Alfred Robinson, medical officer of health for Rotherham, then read a paper on the Gain to the Community through the Adoption of Effective Measures against the Spread of Infection.

Pathology (Wigan) would be glad to have references to a case or cases of ambulatory typhoid fever in which the patient was able to eat, sleep, and do laborious work, in fact, was apparently in good health, up to 60 hours before death. "Pathology" has references to cases of perforation reported in THE LANCET, vol. ii., 1870; vol. i. and vol. ii., 1873; and vol. ii., 1881.

A. J. P.—The work in question was an account of a suggested system for universal language.

ERRATUM.—In our last issue at page 1061, col. i., line 32 and 33, *Nigeria* should be read for "British New Guinea."

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 18th, 1900.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb	Dry Bulb.	Remarks at 8.30 A.M.
Oct. 12	30·05	W.	...	73	58	45	46	48	Hazy
,, 13	29·87	W.	...	74	57	42	50	54	Cloudy
,, 14	29·79	W.	...	57	52	45	44	48	Cloudy
,, 15	29·78	N.W.	0·08	90	54	40	40	44	Fine
,, 16	29·92	NNW	...	68	55	40	40	43	Hazy
,, 17	29·72	SSW	0·01	94	64	43	53	55	Overcast
,, 18	29·84	N.W.	...	79	58	50	49	52	Fine

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

WEDNESDAY (24th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.)

THURSDAY (25th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.) University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

FRIDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

SATURDAY (27th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (22nd).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (20, Hanover-square, W.).—7 P.M. Council Meeting. 8 P.M. The President (Mr. John Ackery): Inaugural Address. Casual Communications:—Mr. W. Harrison: Abnormal Roots.—Mr. S. Wallace: Twisted Roots.—Mr. W. A. Rhodes: The Mechanical Treatment of Superior Protrusion. Mr. A. E. Baker will show and present to the Museum some interesting Old Operating Instruments.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Sheild: Some Remarkable Cases of Sarcoma.—Dr. Poynton: The Occurrence of Arthritis in association with Appendicitis.

TUESDAY (23rd).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Paper:—Dr. W. Gordon (Exeter): Wind Exposure and Phthisis. Demonstration:—Dr. T. Bradshaw (Liverpool): An Undescribed Crystalline Urinary Deposit.

FRIDAY (26th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Exhibition of Clinical Cases followed by Discussion.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (22nd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. T. Colcott Fox: Consultation. (Skin.)

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Robinson: Vulval and Vaginal Discharges.

TUESDAY (23rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. H. Campbell: Consultation. (Medical.)

THE HOSPITAL FOR DISEASES OF THE SKIN (Stamford street, Blackfriars).—5 P.M. Mr. G. Pernet: Animal Parasitic Diseases.

WEDNESDAY (24th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—2–3.30 P.M. Mr. H. Pinch: Class. Clinical Microscopy. 5 P.M. Mr. J. Smith: Clinical Lecture.

LONDON THROAT HOSPITAL (204, Gt. Portland-street, W.).—5 P.M. Mr. Waggett: Examination of Ear. (Post-graduate Course.)

THURSDAY (25th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Consultation. (Surgical.)

WEST LONDON POST GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. S. Edwards: Stricture of the Urethra.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Mr. Pitts: Abdominal Surgery in Children.

CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Dr. W. Wingrave: Morbid Anatomy and Pathology of the Larynx.

FRIDAY (26th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. D. Grant: Consultation. (Throat.)

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